VRF SYSTEM
INDOOR UNIT
Duct Type

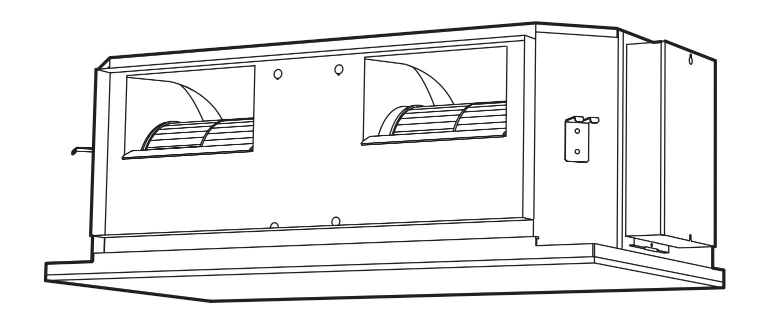


English

中文

INSTALLATION MANUAL

For authorized service personnel only.



Contents

PART NO. 9373870036-02

1. SAFETY PRECAUTIONS

- Be sure to read this Manual thoroughly before installation.
- The warnings and precautions indicated in this Manual contain important information pertaining to your safety. Be sure to observe them.
- Hand this Manual, together with the Operating Manual, to the customer. Request the customer to keep them on hand for future use, such as for relocating or repairing the unit.

⚠ WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.

- Request your dealer or a professional installer to install the indoor unit in accordance with this Installation Manual. An improperly installed unit can cause serious accidents such as water leakage, electric shock, or fire. If the indoor unit is installed in disregard of the instructions in the Installation Manual, it will void the manufacturer's warranty.
- Do not turn ON the power until all work has been completed. Turning ON the power before the work is completed can cause serious accidents such as electric shock or fire.
- If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.
- Installation work must be performed in accordance with national wiring standards by authorized personnel only.

⚠ CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

2. ABOUT THE UNIT

2.1. Precautions for using R410A refrigerant

⚠ WARNING

- Do not introduce any substance other than the prescribed refrigerant into the refrigeration cycle. If air enters the refrigeration cycle, the pressure in the refrigeration cycle will become abnormally high and cause the piping to rupture.
- If there is a refrigerant leak, make sure that it does not exceed the concentration limit. If a refrigerant leak exceeds the concentration limit, it can lead to accidents such as oxygen starvation.
- Do not touch refrigerant that has leaked from the refrigerant pipe connections or other area. Touching the refrigerant directly can cause frostbite.
- If a refrigerant leak occurs during operation, immediately vacate the premises and thoroughly ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.

2.2. Special tool for R410A

⚠ WARNING

- To install a unit that uses R410A refrigerant, use dedicated tools and piping materials that have been manufactured specifically for R410A use. Because the pressure of R410A refrigerant is approximately 1.6 times higher than the R22, failure to use dedicated piping material or improper installation can cause rupture or injury. Furthermore, it can cause serious accidents such as water leakage, electric shock, or fire.

Tool name	Changes
Gauge manifold	The pressure in the refrigerant system is extremely high and cannot be measured with a conventional gauge. To prevent erroneous mixing of other refrigerants, the diameter of each port has been changed. It is recommended to use a gauge manifold with a high pressure display range of –0.1 to 5.3 MPa and a low pressure display range of –0.1 to 3.8 MPa.
Charging hose	To increase pressure resistance, the hose material and base size were changed. (The charging port thread diameter for R410A is 1/2 UNF 20 threads per inch.)
Vacuum pump	A conventional vacuum pump can be used by installing a vacuum pump adapter. Be sure that the pump oil does not backflow into the system. Use one capable for vacuum suction of –100.7 kPa (5 Torr, –755 mmHg).
Gas leakage detector	Special gas leakage detector for R410A refrigerant.

2.3. Accessories

⚠ WARNING
• For installation purposes, be sure to use the parts supplied by the manufacturer or other prescribed parts. The use of non-prescribed parts can cause serious accidents such as the unit falling, water leakage, electric shock, or fire.

- The following installation parts are furnished. Use them as required.
- Keep the Installation Manual in a safe place and do not discard any other accessories until the installation work has been completed.

Name and Shape	Q'ty	Application
Operating Manual	1	
Installation Manual	1	(This book)
Binder (Large)	4	For fixing the coupler heat insulation
Binder (Medium)	3	For power supply and transmission and remote control cable binding
Coupler heat insulation (Small)	1	For indoor side pipe joint (Small)
Coupler heat insulation (Large)	1	For indoor side pipe joint (Large)
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	
Drain hose	2	For installing drain pipe
Hose Band	2	For installing drain hose
Drain hose insulation	2	For installing drain hose

3. INSTALLATION WORK

Especially, the installation place is very important for the split type air conditioner because it is very difficult to move from place to place after the first installation.

3.1. Selecting an installation location

Decide the mounting position together with the customer as follows.

⚠ WARNING
• Select installation locations that can properly support the weight of the indoor unit. Install the units securely so that they do not topple or fall.

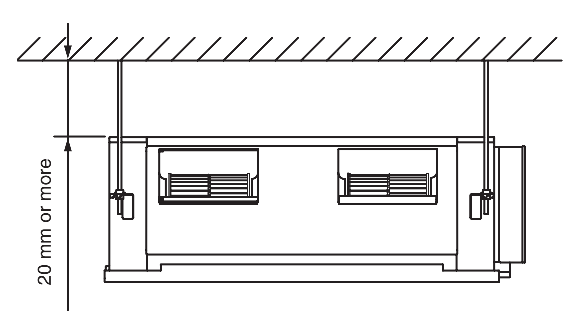
⚠ CAUTION
Do not install the indoor unit in the following areas: • Area with high salt content, such as at the seaside. It will deteriorate metal parts, causing the parts to fall or the unit to leak water. • Area filled with mineral oil or containing a large amount of splashed oil or steam, such as a kitchen. It will deteriorate plastic parts, causing the parts to fall or the unit to leak water. • Area that generates substances that adversely affect the equipment, such as sulfuric gas, chlorine gas, acid, or alkali. It will cause the copper pipes and brazed joints to corrode, which can cause refrigerant leakage. • Area that can cause combustible gas to leak, contains suspended carbon fibers or flammable dust, or volatile inflammables such as paint thinner or gasoline. If gas leaks and settles around the unit, it can cause a fire. • Area where animals may urinate on the unit or ammonia may be generated.
• Do not use the unit for special purposes, such as storing food, raising animals, growing plants, or preserving precision devices or art objects. It can degrade the quality of the preserved or stored objects.
• Do not install where there is the danger of combustible gas leakage.
• Do not install the unit near a source of heat, steam, or flammable gas.
• Install the unit where drainage does not cause any trouble.

- Install the indoor unit, outdoor unit, power supply cable, transmission cable, and remote control cable at least 1 m away from a television or radio receivers. The purpose of this is to prevent TV reception interference or radio noise. (Even if they are installed more than 1 m apart, you could still receive noise under some signal conditions.)
- If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.
- Take precautions to prevent the unit from falling.

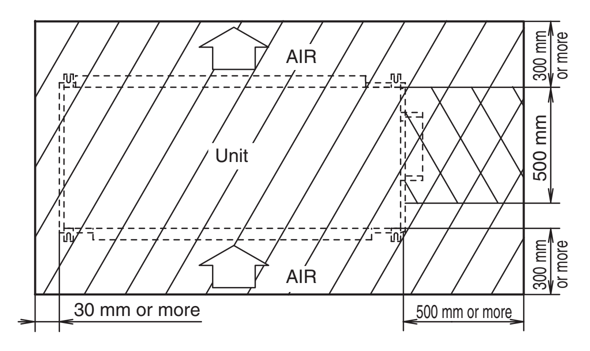
(1) Install the indoor unit on a place having a sufficient strength so that it withstands against the weight of the indoor unit.
(2) The inlet and outlet ports should not be obstructed; the air should be able to blow all over the room.
(3) Leave the space required to service the air conditioner.
(4) Install the unit where connection to the outdoor unit is easy.
(5) Install the unit where the connection pipe can be easily installed.
(6) Install the unit where the drain pipe can be easily installed.
(7) Install the unit where noise and vibrations are not amplified.
(8) Take servicing, etc., into consideration and leave the spaces. Also install the unit where the filter can be removed.
(9) Do not install the unit where it will be exposed to direct sunlight.

3.2. Installation dimension

Install at least 20 mm from the ceiling.



Provide a service hole for inspection purposes as shown below.
Do not place any wiring or illumination in the service space, as they will impede service.



3.3. Installation the unit

⚠ WARNING

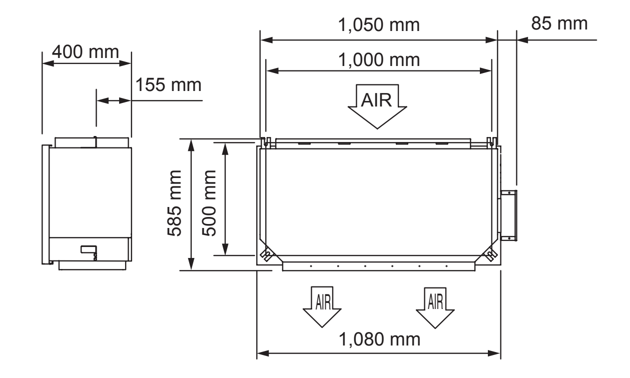
- Install the air conditioner in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration. If the installation location is not strong enough, the indoor unit may fall and cause injuries.

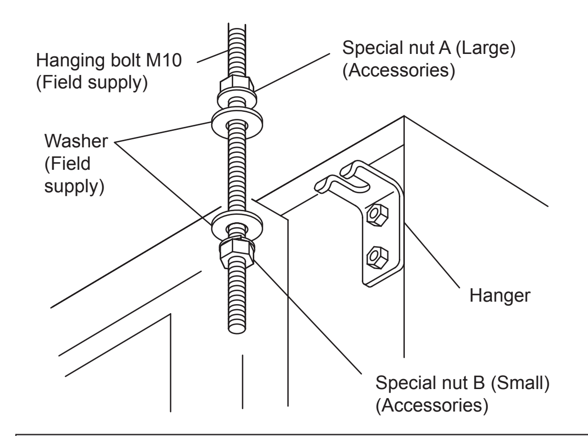
⚠ CAUTION

- Confirm the directions of the air intake and outlet before installing the unit.
- The unit takes in air from the evaporator side, and expels it from the fan side.

3.3.1. Installing the hangers

Hanging bolt installation diagram.



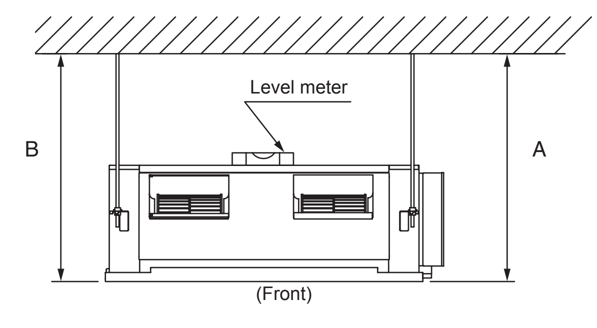


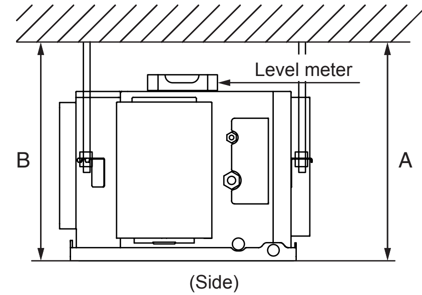
⚠ CAUTION

- Fasten the unit securely with special nuts A and B.

3.3.2. Leveling

Use the procedure in the following figure to adjust the levelness.

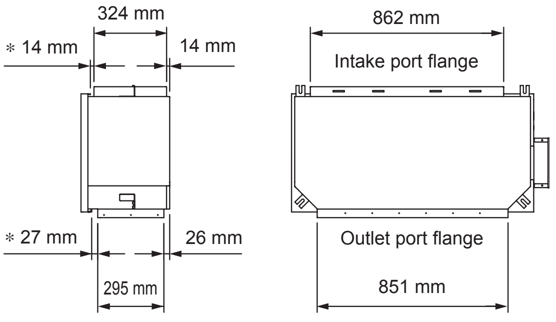




The side A of the unit with the drain port should be slightly lower than the opposite side B of the unit. The height difference between sides A and B should be from 0 to 20 mm.

3.3.3. Mounting the duct

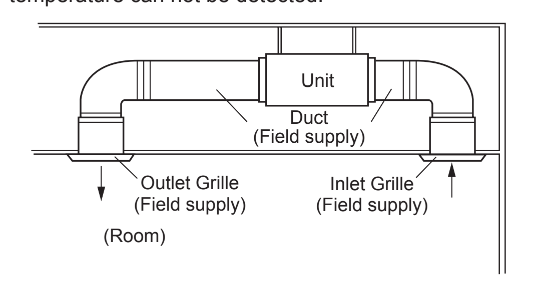
Follow the procedure in the following figure to install the ducts.



* Spacing between flange and drain pan.

⚠ CAUTION
• To prevent people from touching the parts inside the unit, be sure to install grilles on the inlet and outlet ports. The grilles must be designed in such a way that cannot be removed without tools.
• The static pressure outside the unit is as follows. ARXC36L Model: 100-200 Pa ARXC45/60L Models: 100-250 Pa
• If an intake duct is installed, take care not to damage the temperature sensor (the temperature sensor is attached to the intake port flange).

• Install the air inlet grille for air circulation. The correct temperature can not be detected.



• Be sure to install the air filter in the air inlet. If the air filter is not installed, the heat exchanger may be clogged and its performance may decrease.

4. PIPE INSTALLATION

⚠ CAUTION
• Be more careful that foreign matter (oil, water, etc.) does not enter the piping than with refrigerant R410A models. Also, when storing the piping, securely seal the openings by pinching, taping, etc.
• While welding the pipes, be sure to blow dry nitrogen gas through them.

4.1. Selecting the pipe material

⚠ CAUTION
• Do not use existing pipes.
• Use pipes that have clean external and internal sides without any contamination which may cause trouble during use, such as sulfur, oxide, dust, cutting waste, oil, or water.
• It is necessary to use seamless copper pipes. Material : Phosphor deoxidized seamless copper pipes It is desirable that the amount of residual oil is less than 40 mg/10 m.
• Do not use copper pipes that have a collapsed, deformed, or discolored portion (especially on the interior surface). Otherwise, the expansion valve or capillary tube may become blocked with contaminants.
• Improper pipe selection will degrade performance. As an air conditioner using R410A incurs pressure higher than when using conventional refrigerant, it is necessary to choose adequate materials.

- Thicknesses of copper pipes used with R410A are as shown in the table.
- Never use copper pipes thinner than those indicated in the table even if they are available on the market.

Thicknesses of Annealed Copper Pipes (R410A)

Pipe outside diameter [mm (in.)]	Thickness [mm]
6.35 (1/4)	0.80
9.52 (3/8)	0.80
12.70 (1/2)	0.80
15.88 (5/8)	1.00
19.05 (3/4)	1.20

4.2. Pipe requirement

⚠ CAUTION
• Refer to the Installation Manual of the outdoor unit for description of the length of connecting pipe or for difference of its elevation.

• Use pipe with water-resistant heat insulation.

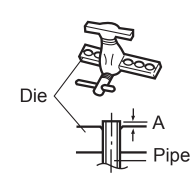
⚠ CAUTION
• Install heat insulation around both the gas and liquid pipes. Failure to do so may cause water leaks. Use heat insulation with heat resistance above 120 °C. (Reverse cycle model only) In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70 %, install heat insulation around the refrigerant piping. If the expected humidity level is 70-80 %, use heat insulation that is 15 mm or thicker and if the expected humidity exceeds 80 %, use heat insulation that is 20 mm or thicker. If heat insulation is used that is not as thick as specified, condensation may form on the surface of the insulation. In addition, use heat insulation with heat conductivity of 0.045 W/(m·K) or less (at 20 °C).

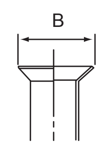
4.3. Flare connection (pipe connection)

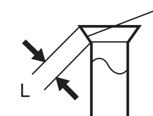
4.3.1. Flaring

• Use special pipe cutter and flare tool exclusive for R410A.

(1) Cut the connection pipe to the necessary length with a pipe cutter.
(2) Hold the pipe downward so that cuttings will not enter the pipe and remove any burrs.
(3) Insert the flare nut (always use the flare nut attached to the indoor and outdoor units respectively) onto the pipe and perform the flare processing with a flare tool. Use the special R410A flare tool, or the conventional flare tool. Leakage of refrigerant may result if other flare nuts are used.
(4) Protect the pipes by pinching them or with tape to prevent dust, dirt, or water from entering the pipes.

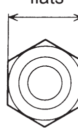






Pipe outside diameter [mm (in.)]	Dimension A [mm] Flare tool for R410A, clutch type	Dimension $B^{0}_{-0.4}$ [mm]
6.35 (1/4)	0 to 0.5	9.1
9.52 (3/8)		13.2
12.70 (1/2)		16.6
15.88 (5/8)		19.7
19.05 (3/4)		24.0

When using conventional flare tools to flare R410A pipes, the dimension A should be approximately 0.5 mm more than indicated in the table (for flaring with R410A flare tools) to achieve the specified flaring. Use a thickness gauge to measure the dimension A.



Pipe outside diameter [mm (in.)]	Width across flats of Flare nut [mm]
6.35 (1/4)	17
9.52 (3/8)	22
12.70 (1/2)	26
15.88 (5/8)	29
19.05 (3/4)	36

4.3.2. Bending pipes

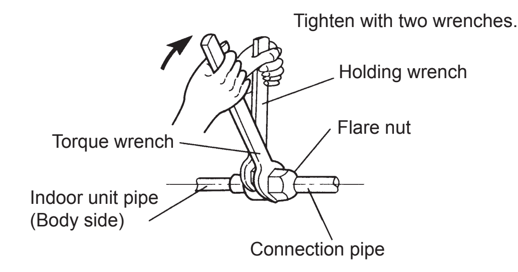
• The pipes are shaped by your hands or pipe bender. Be careful not to collapse them.
• Do not bend the pipes in an angle more than 90°.
• When pipes are repeatedly bend or stretched, the material will harden, making it difficult to bend or stretch them any more. Do not bend or stretch the pipes more than three times.

⚠ CAUTION
• To prevent breaking of the pipe, avoid sharp bends.
• If the pipe is bent repeatedly at the same place, it will break.

4.3.3. Pipe connection

When the flare nut is tightened properly by your hand, hold the body side coupling with a separate spanner, then tighten with a torque wrench.

⚠ CAUTION
• Hold the torque wrench at its grip, keeping it in the right angle with the pipe, in order to tighten the flare nut correctly.
• Tighten the flare nuts with a torque wrench using the specified tightening method. Otherwise, the flare nuts could break after a prolonged period, causing refrigerant to leak and generate a hazardous gas if the refrigerant comes into contact with a flame.

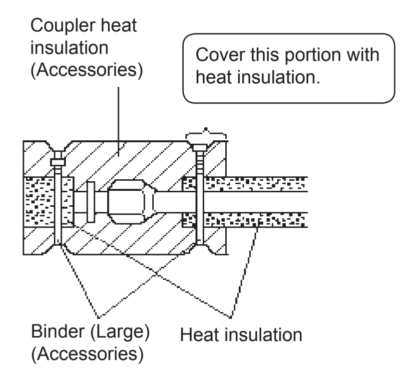


⚠ CAUTION
• Be sure to apply the pipe against the port on the indoor unit and the outdoor unit correctly. If the centering is improper, the flare nut cannot be tightened smoothly. If the flare nut is forced to turn, the threads will be damaged.
• Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.
• Do not use mineral oil on flared part. Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.

Flare nut [mm (in.)]	Tightening torque [N·m (kgf·cm)]
6.35 (1/4) dia.	16 to 18 (160 to 180)
9.52 (3/8) dia.	32 to 42 (320 to 420)
12.70 (1/2) dia.	49 to 61 (490 to 610)
15.88 (5/8) dia.	63 to 75 (630 to 750)
19.05 (3/4) dia.	90 to 110 (900 to 1,100)

4.4. Installing heat insulation

Install the coupler heat insulation after completing the refrigerant leak check (for details, refer to the Installation Manual for the outdoor unit).

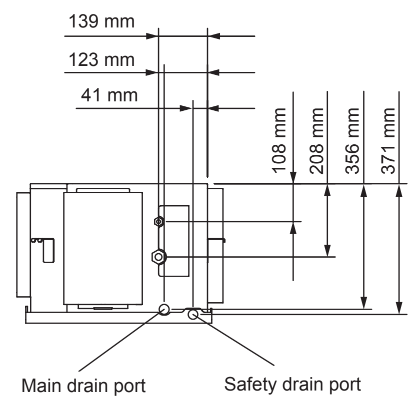


⚠ CAUTION
• There should be no gaps between the insulation and the product.

5. INSTALLING DRAIN PIPES

- Use general hard polyvinyl chloride pipe (VP25) and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- The position of the installed drain pipe should have a downward gradient of 1/100 or more.
- To prevent the pipe from freezing, use a heat insulation material as needed.

Position of drain piping



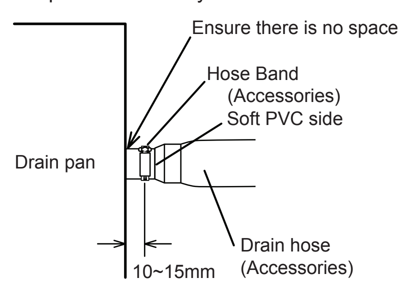
	O.D.
Drain pipe • For main drain port • For safety drain port	32 mm (VP25)

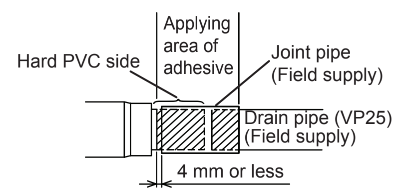
- This product has drain ports in two locations. Follow the procedure in the figure to connect drain hose and drain pipes to each of them.

INSTALL THE DRAIN HOSE TO THE MAIN AND SAFETY DRAIN PORT

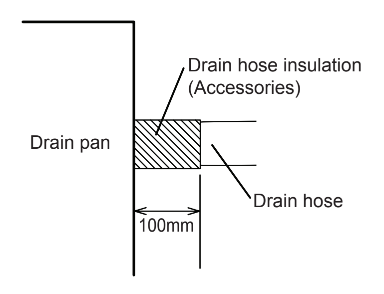
Working procedure

(1) Install the attached drain hose to the main and safety drain port of the body. Install the hose band from the top of the hose within the graphic display area. Secure firmly with the hose band.
(2) Use vinyl adhesive agent to glue the drain piping (PVC pipe VP25) which is prepared on site or piping socket. (Apply color adhesive agent evenly until the gauge line and seal)
(3) Check the drainage.
(4) Install the heat insulation.
(5) Use the attached heat insulation to insulate the drain port and band parts of the body.



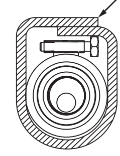


Wrap the Drain hose insulation around the drain hose connection.

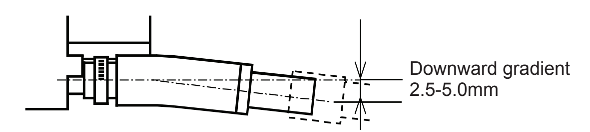


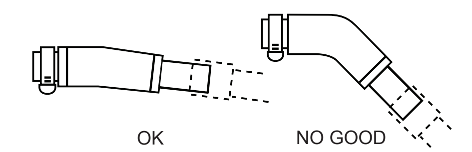
Hose opening view

Wind the attached heat insulation around the hose band. Make sure the alignment is on top.



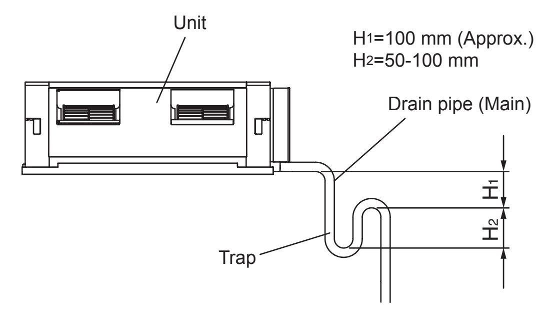
After installing the Drain hose, check if the drainage is smooth.



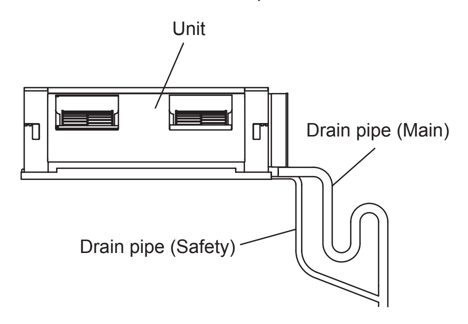


INSTALL THE DRAIN PIPE

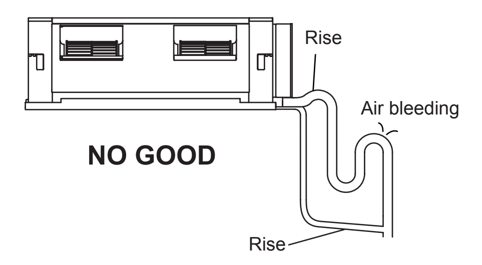
① **Main drain**
On the main drain, provide one trap near the indoor unit.



② **Safety drain**
There is no need to provide a trap for the safety drain.
If the safety drain is connected to the main drain, make the connection below the main trap.



- Make sure that drain pipe is installed without rises.
- Do not perform air bleeding.



⚠ CAUTION
• Be sure to properly insulate the drain pipes.
• Make sure the drain water is properly drained.

6. ELECTRICAL WIRING

⚠ WARNING
• Electrical work must be performed in accordance with this Manual by a person certified under the national or regional regulations. Be sure to use a dedicated circuit for the unit. An insufficient power supply circuit or improperly performed electrical work can cause serious accidents such as electric shock or fire.
• Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
• Use the included connection cables and power cables or ones specified by the manufacturer. Improper connections, insufficient insulation, or exceeding the allowable current can cause electric shock or fire.
• For wiring, use the prescribed type of cables, connect them securely, making sure that there are no external forces of the cables applied to the terminal connections. Improperly connected or secured cables can cause serious accidents such as overheating the terminals, electric shock, or fire.
• Do not modify the power cables, use extension cables, or use any branches in the wiring. Improper connections, insufficient insulation, or exceeding the allowable current can cause electric shock or fire.
• Match the terminal board numbers and connection cable colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
• Securely connect the connection cables to the terminal board. In addition, secure the cables with wiring holders. Improper connections, either in the wiring or at the ends of the wiring, can cause a malfunction, electric shock, or fire.
• Always fasten the outside covering of the connection cable with the cable clamp. (If the insulator is chafed, electric leakage may occur.)
• Securely install the electrical box cover on the unit. An improperly installed electrical box cover can cause serious accidents such as electric shock or fire through exposure to dust or water.
• Install sleeves into any holes made in the walls for wiring. Otherwise, a short circuit could result.
• Install a ground leakage breaker. In addition, install the ground leakage breaker so that the entire AC main power supply is cut off at the same time. Otherwise, electric shock or fire could result.
• Install a ground leakage breaker. If a ground leakage breaker is not installed, it may cause electric shock or fire.
• Always connect the ground cable. Improper grounding work can cause electric shocks.
• Install the remote control cables so as not to be direct touched with your hand.
• Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
• Connect the connection cable firmly to the terminal board. Imperfect installation may cause a fire.

⚠ CAUTION
• Ground the unit. Do not connect the ground cable to a gas pipe, water pipe, lightning rod, or a telephone ground cable. Improper grounding may cause electric shock.
• Do not connect power supply cables to the transmission or remote control terminals, as this will damage the product.
• Never bundle the power supply cable and transmission cable together. Bundling these cables together will cause miss operation.
• When handling PCB, static electricity charged in the body may cause malfunction of the PCB. Follow the cautions below: • Establish a ground for the indoor and outdoor units and peripheral devices. • Cut power (breaker) off. • Touch metal part of the indoor and outdoor units for more than 10 seconds to discharge static electricity charged in the body. • Do not touch terminals of parts and patterns implemented on PCB.

6.1. Electrical requirement

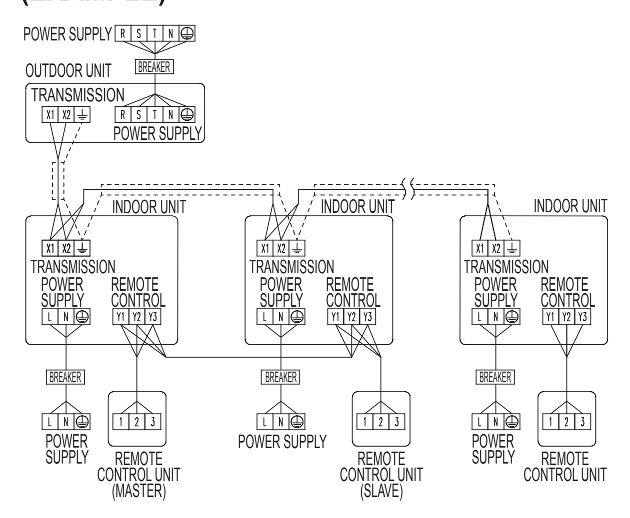
Voltage rating	230 V
Operating range	198 - 264 V

	Recom-mended cable size (mm^2)	Cable type	Remark
Power supply cable	2.5	Type245 IEC57 or equivalent	1ø 50 Hz 198 - 264 V 2 Cable + ground
Transmission cable	0.33	LONWORKS compatible cable	22 AWG LEVEL 4 (NEMA) non-polar 2 core, twisted pair solid core diameter 0.65 mm
Remote control cable	0.33	Sheathed PVC cable*	Polar 3 core Twisted pair

*: Use shielded cable in accordance with local rules for remote control cable.

6.2. Wiring method

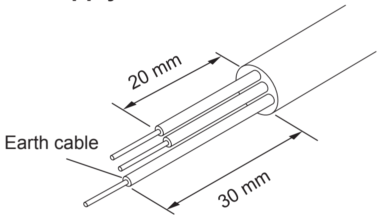
(EXAMPLE)



6.3. Unit wiring

• Before attaching the cable to terminal block.

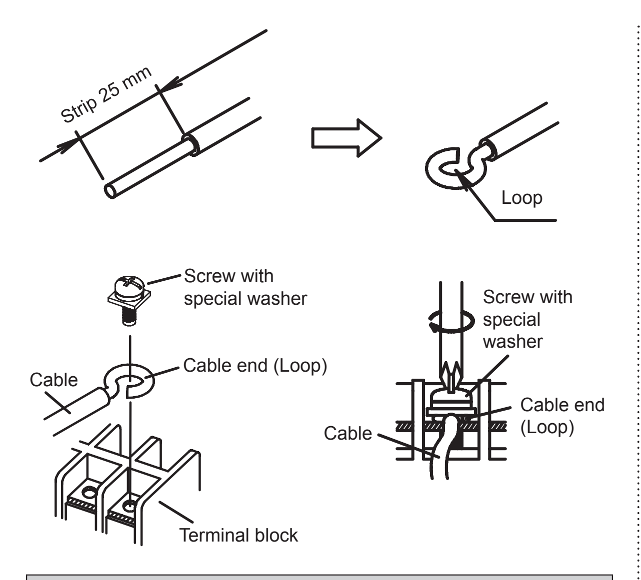
6.3.1. Power supply cable



Power supply cable

A. For solid core wiring

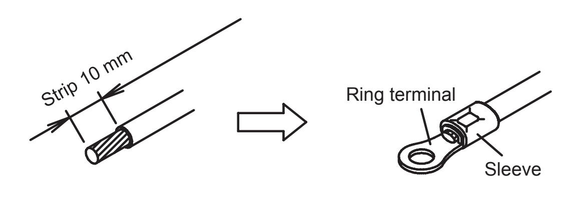
(1) To connect the electrical terminal, follow the below diagram and connect after looping it around the end of the cable.
(2) Use the specified cables, connect them securely, and fasten them so that there is no stress placed on the terminals.
(3) Use an appropriate screwdriver to tighten the terminal screws. Do not use a screwdriver that is too small, otherwise, the screw heads may be damaged and prevent the screws from being properly tightened.
(4) Do not tighten the terminal screws too much, otherwise, the screws may break.
(5) See the table for the terminal screw tightening torques.
(6) Please do not fix two power supply cables with one screw.

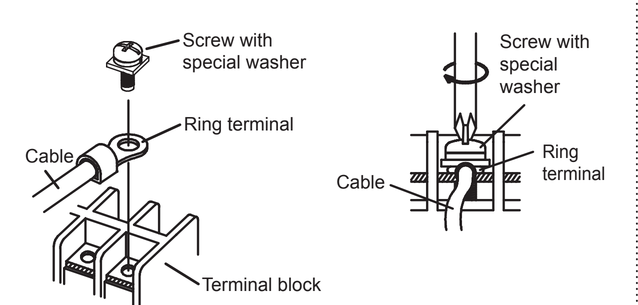


> ⚠ **WARNING**
>
> • When using solid core cables, do not use the ring terminal. If you use the solid core cables with the ring terminal, the ring terminal's pressure bonding may malfunction and cause the cables to abnormally heat up.

B. For strand wiring

(1) Use ring terminals with insulating sleeves as shown in the figure below to connect to the terminal block.
(2) Securely clamp the ring terminals to the cables using an appropriate tool so that the cables do not come loose.
(3) Use the specified cables, connect them securely, and fasten them so that there is no stress placed on the terminals.
(4) Use an appropriate screwdriver to tighten the terminal screws. Do not use a screwdriver that is too small, otherwise, the screw heads may be damaged and prevent the screws from being properly tightened.
(5) Do not tighten the terminal screws too much, otherwise, the screws may break.
(6) See the table for the terminal screw tightening torques.
(7) Please do not fix two power supply cables with one screw.

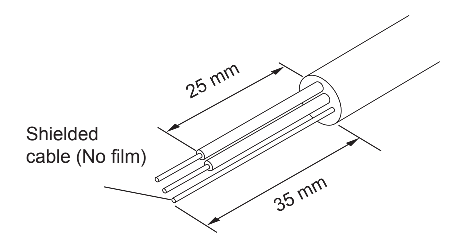




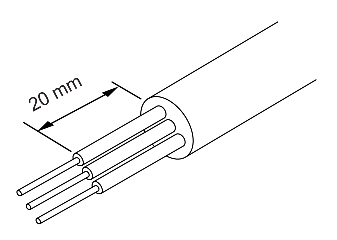
> ⚠ **WARNING**
>
> • Use ring terminals and tighten the terminal screws to the specified torques, otherwise, abnormal overheating may be produced and possibly cause heavy damage inside the unit.

Tightening torque	
M4 screw (Power supply/L, N, GND)	1.2 to 1.8 N·m (12 to 18 kgf·cm)

6.3.2. Transmission and Remote control cable



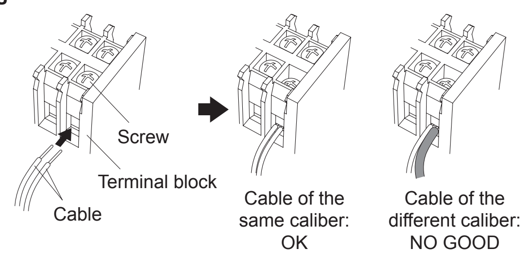
Transmission cable



Remote control cable

- Connect remote control and transmission cables as shown in Fig. B.
- When the two cables are attached.

Fig. B



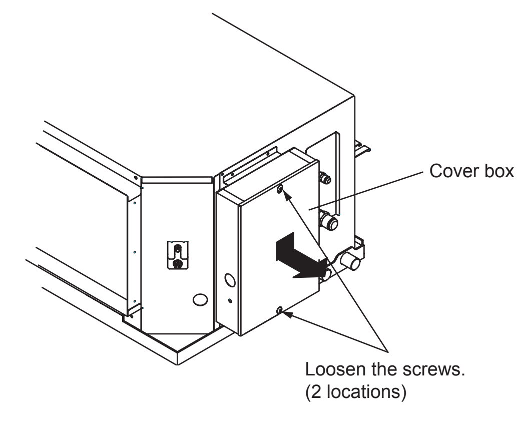
> ⚠ **WARNING**
>
> • Tighten the terminal screws to the specified torques, otherwise, abnormal overheating may be produced and possibly cause heavy damage inside the unit.

Tightening torque	
M3.5 screw (Transmission/X1, X2) (Remote control/Y1, Y2, Y3)	0.8 to 1.0 N·m (8 to 10 kgf·cm)

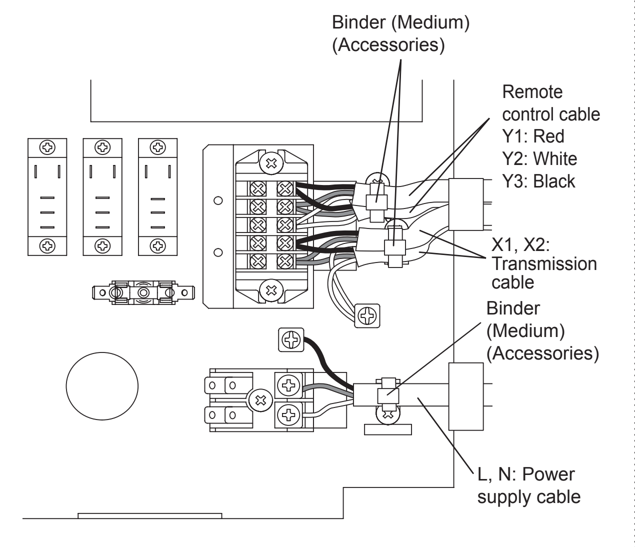
⚠ CAUTION
• To peel the film from the lead cable, use a dedicated tool that will not damage the conductor cable.
• When installing a screw on the terminal block, do not cut the cable by overtightening the screw. On the other hand, an undertightened screw can cause faulty contact, which will lead to a communication failure.

6.4. Connection of wiring

(1) Remove the control box cover and install each connection cable.



(2) After wiring is complete, clamp the remote control cable, transmission cable and power supply cable with binder.



⚠ CAUTION
• When installing a screw on the terminal block, do not cut the cable by overtightening the screw. On the other hand, an undertightened screw can cause faulty contact, which will lead to a communication failure.

(3) Attach the control box cover.

7. FIELD SETTING

- Refer to the following three items for setting the FIELD SETTING address. The respective settings are included below.

(1) IU AD, REF AD SW settings... This section
(2) Remote control settings .... Refer to the wired or wireless remote control manual for detailed setting information. (Set IU AD, REF AD SW to 0)
(3) Automatic address settings... Refer to the indoor unit manual for detailed setting information. (Set IU AD, REF AD SW to 0)

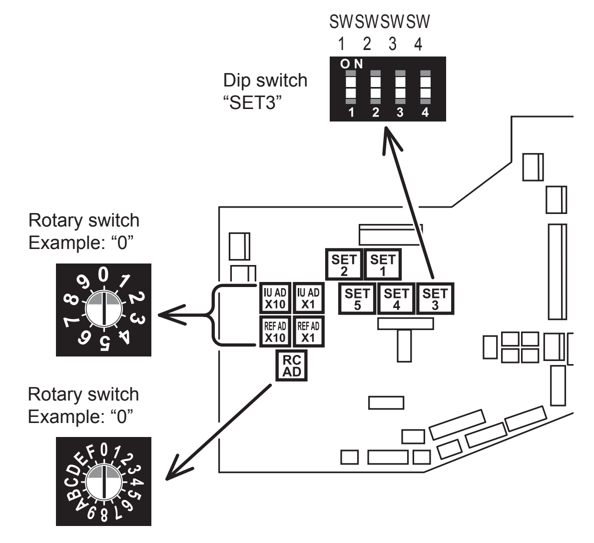
⚠ CAUTION
• Be sure to turn OFF the power before performing the field setting.

7.1. Setting the address

Manual address setting method

- The indoor unit address and the refrigerant circuit address can also be set up through the wireless remote controller

⚠ CAUTION
• Use an insulated screwdriver to set the dip switches.



Setting	Setting range	Type of switch		
Indoor unit address	0–63	Setting example 2	IU AD × 10	IU AD × 1
Refrigerant circuit address	0–99	Setting example 63	REF AD × 10	REF AD × 1

(1) Indoor unit address
Rotary switch (IU AD × 1)......Factory setting “0”
Rotary switch (IU AD × 10)....Factory setting “0”
When connecting multiple indoor units to one refrigerant system, set the address at IU AD SW as shown in the Table A.

(2) Refrigerant circuit address
Rotary switch (REF AD × 1)......Factory setting “0”
Rotary switch (REF AD × 10)....Factory setting “0”
In the case of multiple refrigerant systems, set REF AD SW as shown in the Table A for each refrigerant system.
Set to the same refrigerant circuit address as the outdoor unit.

Table A

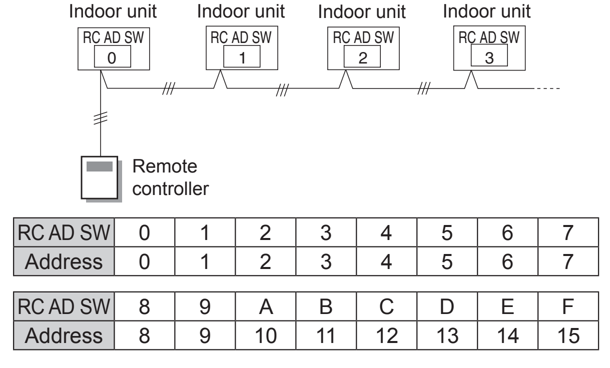
Address	Rotary Switch Setting		Address	Rotary Switch Setting	
Refrigerant circuit	REF AD SW		Indoor unit	IU AD SW	
	×10	×1		×10	×1
0	0	0	0	0	0
1	0	1	1	0	1
2	0	2	2	0	2
3	0	3	3	0	3
4	0	4	4	0	4
5	0	5	5	0	5
6	0	6	6	0	6
7	0	7	7	0	7
8	0	8	8	0	8
9	0	9	9	0	9
10	1	0	10	1	0
11	1	1	11	1	1
12	1	2	12	1	2
⋮	⋮	⋮	⋮	⋮	⋮
99	9	9	63	6	3

Do not set the indoor unit address (IU AD SW) at 64 to 99. It may result failure.

(3) Remote controller address
Rotary switch (RC AD SW)....Factory setting “0”
When connecting multiple indoor units to one standard wired remote controller, set the address at RC AD SW in sequence from 0.

Setting	Setting range	Type of switch
Remote controller address	0–15	Setting example 0 — RC AD

Example If 4 indoor units are connected.



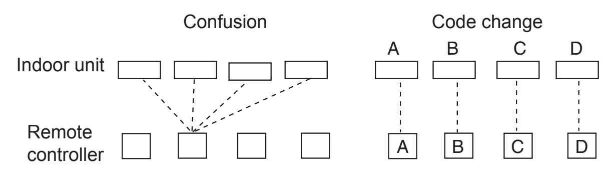
RC AD SW	0	1	2	3	4	5	6	7
Address	0	1	2	3	4	5	6	7

RC AD SW	8	9	A	B	C	D	E	F
Address	8	9	10	11	12	13	14	15

7.2. Custom code setting

Selecting the custom code prevents the indoor unit mix-up. (Fig. B)
(Up to 4 codes can be set.)
Perform the setting for both the indoor unit and the remote controller.

Fig. B



• Custom code setting for indoor unit
Set the DIP SW SET 3 SW1, SW2, referring to the Table B.

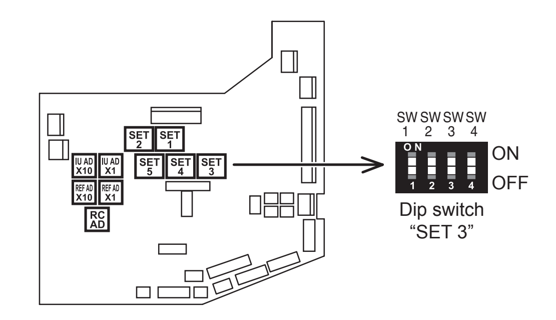


Table B

	Custom code			
	A (Factory setting)	B	C	D
DIP SW SET 3 SW1	OFF	ON	OFF	ON
DIP SW SET 3 SW2	OFF	OFF	ON	ON

7.3. Function setting

- FUNCTION SETTING can be performed with the wired or wireless remote control.
  (The remote control is optional equipment)
- Refer to the wired or wireless remote control manual for detailed setting information. (Set IU AD, REF AD SW to 0)
- Refer to “7.1. Setting the address” for indoor unit address and refrigerant circuit address settings.
- Turn the power of the indoor unit ON before starting the setting.

  * Turning on the power indoor units initializes EEV, so make sure the piping air tight test and vacuuming have been conducted before turning on the power.
  * Also check again to make sure no wiring mistakes were made before turning on the power.

Function details

Function	Function number	Setting number		Default	Details
Filter indicator interval	11	00	Default	○	Adjust the filter cleaning interval notification. If the notification is too early, change to setting 01. If the notification is too late, change to setting 02.
		01	Longer		
		02	Shorter		

Filter indicator action	13	00	Enable	○	Enable or disable the filter indicator. Setting 02 is for use with a central remote control.
		01	Disable		
		02	Display only on central remote control		
Horizon-tal swing airflow direction	24	00	Default	○	Adjust the horizontal swing airflow direction. (For horizontal swing equipped models)
		01	Left half		
		02	Right half		
Cool air tem-perature trigger	30	00	Default	○	Adjust the cool air trigger temperature. To lower the trigger temperature, use setting 01. To raise the trigger temperature, use setting 02.
		01	Adjust (1)		
		02	Adjust (2)		
Hot air tem-perature trigger	31	00	Default	○	Adjust the hot air trigger temperature. To lower the trigger temperature by 6 degrees C, use setting 01. To lower the trigger temperature by 4 degrees C, use setting 02. To raise the trigger temperature, use setting 03.
		01	Adjust (1)		
		02	Adjust (2)		
		03	Adjust (3)		
Auto restart	40	00	Enable		Enable or disable automatic system restart after a power outage.
		01	Disable	○	
External control	46	00	Start/Stop	○	Allow an external controller to start or stop the system, or to perform an emergency shutdown. *If an emergency shutdown is performed from an external controller, all refrigerant systems will be disabled.
		01	Emergency stop		
Error report target	47	00	All	○	Change the target for reporting errors. Errors can either be reported in all locations, or only on the wired remote.
		01	Display only on central remote control		

8. TEST OPERATION

8.1. Test operation using PCB (Outdoor unit)

- Refer to the Installation Manual for the outdoor unit if the PCB for the outdoor unit is to be used for the test operation.

8.2. Test operation using remote controller

- Refer to the Installation Manual for the remote control unit to perform the test operation using the remote control unit.
- When the air conditioner is being test run, the OPERATION and TIMER indicator lamps flash slowly at the same time.

For details, please refer to the Manual of “IR Receiver Unit” or “Wired Remote Controller”.

9. CHECK LIST

Pay special attention to the check items below when installing the indoor unit(s). After installation is complete, be sure to check the following check items again.

Check items	If not performed correctly	Check box
Has the indoor unit been installed correctly?	Vibration, noise, indoor unit may drop	
Has there been a check for gas leaks (refrigerant pipes)?	No cooling, No heating	
Has heat insulation work been completed?	Water leakage	
Does water drain easily from the indoor units?	Water leakage	
Is the voltage of the power source the same as that indicated on the label on the indoor unit?	No operation, heat or burn damage	
Are the wires and pipes all connected completely?	No operation, heat or burn damage	
Is the indoor unit grounded?	Short circuit	
Is the connection cable the specified thickness?	No operation, heat or burn damage	
Are the inlets and outlets free of any obstacles?	No cooling, No heating	
After installation is completed, has the proper operation and handling been explained to the user?	————	

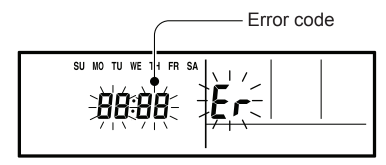
10. ERROR CODES

If you use a wired type remote control, error codes will appear on the remote control display. If you use a wireless remote control, the lamp on the photodetector unit will output error codes by way of blinking patterns. See the lamp blinking patterns and error codes in the table below.

Abnormal display			Wired Remote Controller Error code	Abnormal contents
OPERATION indicator lamp (green)	TIMER indicator lamp (orange)	FILTER indicator lamp (red)		
● (1)	● (2)	◇	12	Remote control abnormal communication
● (1)	● (4)	◇	14	Anomalous network communications
● (1)	● (6)	◇	16	Abnormal parallel communication
● (3)	● (1)	◇	31	Abnormal power frequency
● (3)	● (2)	◇	32	Abnormal model information / abnormal EEPROM accession
● (4)	● (1)	◇	41	Abnormal room temperature thermistor
● (4)	● (2)	◇	42	Abnormal indoor heat exchanger temperature thermistor
● (5)	● (1)	◇	51	Abnormal indoor fan motor
● (5)	● (3)	◇	53	Abnormal drainage
● (9)	● (15)	◇	9U	Abnormal outdoor unit

Display mode ● : 0.5s ON / 0.5s OFF
◇ : 0.1s ON / 0.1s OFF
( ) : Number of flashing

Wired Remote Controller Display



For details on marking the ERROR CODES, please refer to the Manual of “IR Receiver Unit” or “Wired Remote Controller”.

VRF 系统
室内机组
风管式

⚠ 注意

R410A
制冷剂

本空调含有并使用制冷剂R410A。

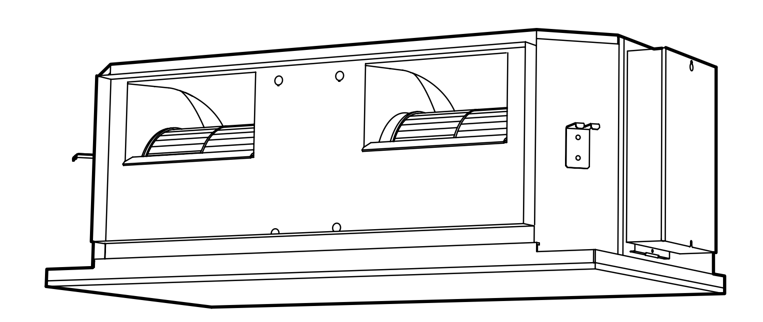
本产品需由专业人员安装或维修。

在安装、保养及（或）维修本产品前，请先阅读联邦、州、地区及地方之法律、规则、法规、及安装手册。

中文

安装说明书

只供授权专业维修人员使用。



目录

PART NO. 9373870036-02

1. 安全注意事项

- 安装之前务必彻底阅读该说明书。
- 该说明书指出的警告和注意事项包含与您的安全密切相关的重要信息。请务必遵循这些信息。
- 将该说明书与操作手册交给用户。请用户将它们收藏好，以便日后使用，例如更换机组位置或对机组进行修理。

⚠ 警告	该标志表示如果步骤执行失当，可能会导致用户死亡或严重伤害。

- 请您的经销商或专业安装人员依照该安装说明书安装机组。机组安装不适当可能造成严重的事故，例如漏水、电击或火灾。如果没有依照安装说明书中的说明来安装室内机组，则制造商不会保用。
- 未完成所有工作之前请勿打开电源。在工作完成之前打开电源可能造成严重的事故，例如电击或火灾。
- 如果制冷剂在执行工作时泄漏，请为该区域通风。如果制冷剂接触火，就会产生有害气体。
- 务必由授权的维修人员按照国家接线标准执行安装工作。

⚠ 注意	该标志表示，如果步骤执行不当，可能会导致用户人身伤害或财产损害。

2. 关于机组

2.1. 使用 R410A 制冷剂时的注意事项

⚠ 警告

- 请勿让除规定的制冷剂之外的其他物质进入制冷循环。如果空气进入制冷循环，则其中的压力将变得异常之高，并且会造成管道破裂。
- 如果制冷剂泄漏，请确保它未超过浓度限制。如果制冷剂泄漏超过了浓度限制，则可能造成缺氧等事故。
- 请勿触摸从制冷剂管接头等部位泄漏的制冷剂。直接触摸制冷剂会导致冻伤。
- 如果运行过程中发生制冷剂泄漏，请立即离开建筑物，并对该区域彻底通风。如果制冷剂接触火，就会产生有害气体。

2.2. R410A 的专用工具

⚠ 警告

- 要安装使用 R410A 制冷剂的机组，请使用专供 R410A 使用而制造的专用工具和管道材料。由于 R410A 制冷剂的压力约是 R22 的 1.6 倍，未使用专用的管道材料或不当的安装可能会导致管道破裂或造成人身伤害。另外，还可能会导致如漏水、电击或火灾等严重事故。

工具名称	变更内容
压力表歧管	压力较高，不能使用传统的压力计测量。为了避免与其它制冷剂错误混合，每个接口的直径均已更改。建议使用具有高压力显示范围为 -0.1 至 5.3 MPa 以及低压力显示范围为 -0.1 至 3.8 MPa 的压力表歧管。
充注软管	为了增加抗压能力，软管材料和尺寸已变更。 (R410A 的充注接口螺纹直径为 1/2 UNF 每英寸 20 个螺纹。)
真空泵	可以通过安装真空泵适配器使用传统的真空泵。 确保真空泵油不会回流到系统中。 使用真空吸力能够达到 –100.7 kPa (5 Torr, –755 mmHg) 的真空泵。
气体泄漏检测器	HFC 制冷剂 R410A 的专用气体泄漏检测器。

2.3. 附件

⚠ 警告

• 安装时，请务必使用制造商供应的部件或其他规定部件。使用非规定部件可能造成严重的事故，例如机组掉落、漏水、电击或火灾。

• 本机配有以下安装部件。请按照需要使用。
• 请妥善保管安装说明书，并且不要在安装工作完成前丢弃任何其它附件。

说明	数量	应用
使用说明书	1	
安装说明书	1	（本书）
扎线带（大）	4	用于固定接管绝热材料
扎线带 (中等)	3	用于绑定电源和信号线以及遥控器线
接管绝热材料（小）	1	用于室内机管道接头（小管）
接管绝热材料（大）	1	用于室内机管道接头（大管）
专用螺母 A（大法兰）	4	用于将室内机组悬挂在天花板上
专用螺母 B（小法兰）	4	
排水软管	2	用于安装排水软管
软管卡子	2	用于安装排水软管
排水管绝热材料	2	用于安装排水软管

3. 安装工作

对于分体式空调，安装地点尤为重要，因为首次安装后，移动位置非常困难。

3.1. 选择安装位置

请按照以下要求与用户一起决定安装位置。

⚠ 警告

• 选择能有效支撑室内机重量的安装位置。将机组安装牢固，以免倾倒或坠落。

⚠ 注意

请勿将机组安装在下列区域 ：
• 盐含量高的区域，例如海边。这会损坏金属部件，使部件掉落或使机组漏水。
• 充满矿物油或包含大量溅油或蒸气的区域，例如厨房。这会损坏塑料部件，使部件掉落或使机组漏水。
• 会产生对设备有负面影响的物质（例如硫磺气体、氯气、酸或碱）的区域。这会腐蚀铜管和铜焊接合，从而造成制冷剂泄漏。
• 可能造成易燃气体泄漏、含有悬浮碳纤维或易燃尘埃，或者如涂料稀释剂或汽油等挥发性易燃物的区域。如果气体泄漏并沉积在机组周围，可能会造成火灾。
• 动物可能会在机组上排尿或者可能会产生氨的区域。

• 请勿将机组用于特殊用途，例如存放食物、饲养动物、栽培植物或保存精密装置或艺术品。
这可能降低保存或存放对象的质量。

• 请勿安装在可能泄漏燃烧气体的地方。

• 请勿将机组安装在靠近热源、蒸汽或易燃气体的地方。

• 将机组安装在排水不会造成任何问题的地方。

• 请在距离电视机和收音机 1 m 以外的地方进行室内机和室外机、电力接线、信号接线及遥控接线的安装，以免发生图像失真和声音失真。（然而，即使将上述机组和接线安装在距电视机和收音机 1 m 以外的地方，根据电波的状况的不同，声音失真也可能无法避免。）

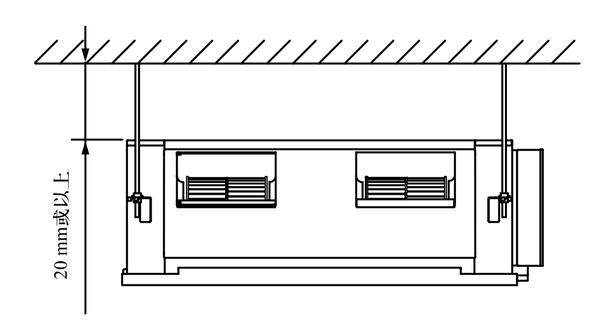
• 如 10 岁以下的儿童有可能接触到时，请采取适当的预防措施，使他们无法接触机组。

• 请采取预防措施防止机组坠落。

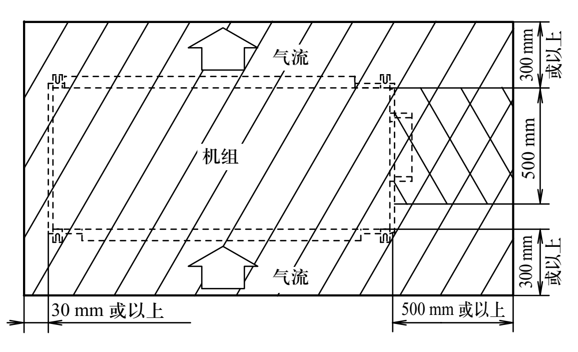
(1) 将室内机安装在具有足够强度的地方，以便能承受室内机的重量。
(2) 请勿堵塞进气口和出气口。空气应能吹向整个房间。
(3) 请保留可以维修空调的空间。
(4) 将机组安装在容易连接室内机的地方。
(5) 请在方便安装连接管的地方安装机组。
(6) 请在方便安装排水管的地方安装机组。
(7) 将机组安装在不会将噪音和振动放大的地方。
(8) 应考虑之后的维修等情况，并留出空间。将机组安装在可以拆卸过滤网的地方。
(9) 请勿在易受阳光直射处安装机组。

3.2. 安装尺寸

距天花板至少 20 mm 处安装。



提供用于检查的检修孔，如下图所示。
切勿在维修空间布置线路或照明设施，否则会妨碍维修。



3.3. 安装机组

⚠ 警告

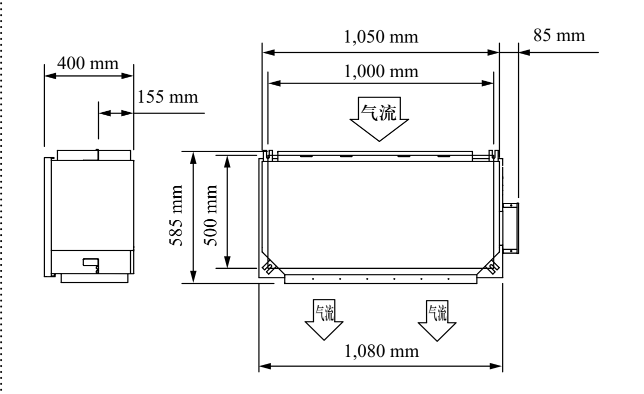
• 将空调安装在能够承受至少主机重量 5 倍并且不会将噪音或振动放大的地方。如果安装位置不够坚固，室内机可能会坠落，引起人身伤害。

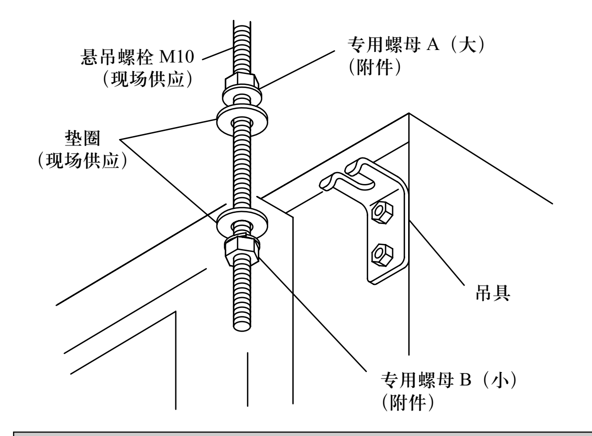
⚠ 注意

• 请在安装机组前确认进气和出气方向。
机组从蒸发器一侧进气，从风扇一侧出气。

3.3.1. 安装吊具

悬吊螺栓安装示意图。



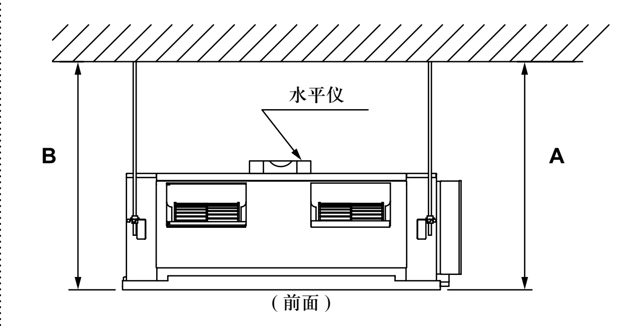


⚠ 注意

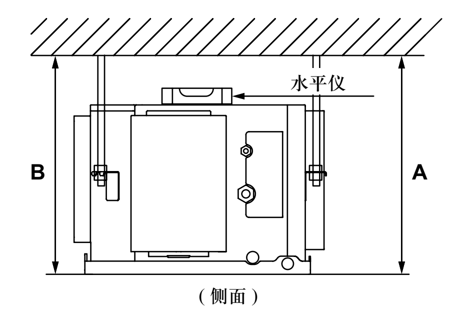
• 用专用螺母 A 和 B 牢固地拧紧。

3.3.2. 调平

用下图所示的步骤调整水平度。



（前面）

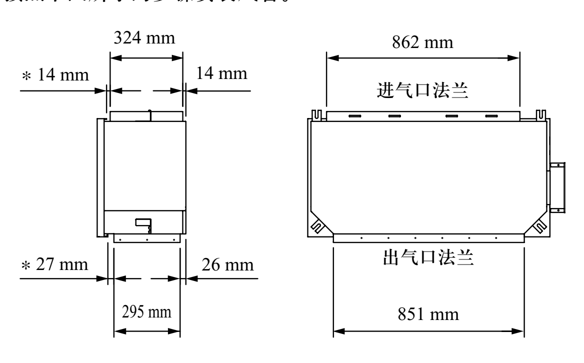


（侧面）

机组有排水口的一侧 A 应稍低于机组的另一侧 B。A 侧与 B 侧之间应该有 0 至 20 mm 的高度差。

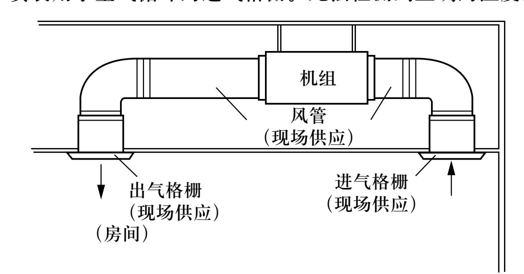
3.3.3. 安装风管

按照下图所示的步骤安装风管。



＊法兰与排水盘之间的距离。

⚠注意
• 为了防止别人触碰机组内部的部件，请务必在进气口和出气口安装格栅。格栅必须设计为无法用工具拆卸。
• 机组外静压如下： ARXC36L 机型：100-200 Pa ARXC45/60L 机型：100-250 Pa
• 如果安装了进气管，请小心不要损坏温度传感器（温度传感器安装在进气口法兰上）。
• 安装用于空气循环的进气格栅。无法检测到正确的温度。



⚠注意
• 请务必在进气口中安装空气过滤网。如果未安装空气过滤网，热交换器可能被堵塞并降低性能。

4. 管道安装

⚠注意
• 要小心注意的是，杂质（油、水等）不会像制冷剂 R410A 型号那样进入管道。另外，存放管道时，通过夹住、捆绑等牢固密封管口。
• 焊接管道时，务必向里面冲入干燥的氮气。

4.1. 选择管材

⚠注意
• 不要使用原有的管道。
• 使用的管道应内外表面清洁，不含在使用过程中可能引起故障的污染物，例如硫、氧化物、灰尘、切屑、油或水。
• 必须使用无缝铜管。 材料：经过磷脱氧处理的无缝铜管 残油量最好小于 40 mg/10 m。
• 使用的铜管不能带有压扁、变形或变色的部分（尤其是在内部表面）。 否则，膨胀阀或毛细管可能会被污染物堵塞。
• 管道选择不当会降低性能。 由于使用 R410A 的空调会比使用传统的制冷剂时承受更高的压力，因此需要选择适当的材料。

• 使用 R410A 的铜管厚度如表所示。
• 绝对不要使用厚度不足于表中所示的铜管，即使市场上有售。

退火铜管的厚度（R410A）

管道外径 [mm (in.)]	厚度 [mm]
6.35 (1/4)	0.80
9.52 (3/8)	0.80
12.70 (1/2)	0.80
15.88 (5/8)	1.00
19.05 (3/4)	1.20

4.2. 管道要求

⚠ 注意
• 有关连接管道长度或不同标高的规格，请参见室外机的安装说明书。

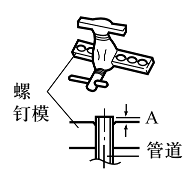
• 使用带防水热绝缘材料的管道。

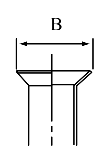
⚠ 注意
• 请在气体和液体管道周围安装绝热材料。否则可能会导致漏水。 请使用抗热能力超过 120℃的绝热材料。（仅限逆循环型） 此外，如果安装制冷剂管道的地方的湿度可能会超过 70%，请在制冷剂管道周围安装绝热材料。 如果预计的湿度为 70-80%，请使用 15 mm 或更厚的绝热材料；如果预计的湿度超过 80%，请使用 20 mm 或更厚的绝热材料。如果使用的绝热材料未达到指定的厚度，可能会在材料表面形成冷凝。 此外，请使用热传导率为 0.045 W/(m•K) 或以下（20˚C 时）的绝热材料。

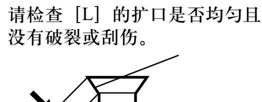
4.3. 扩口接头（管接头）

4.3.1. 扩口

• 请使用专用的切管机和 R410A 专用的扩口工具。
(1) 使用切管机将连接管道截成所需的长度。
(2) 向下按住水管以避免切屑进入管道并去除毛刺。
(3) 将扩口螺母（必须使用分别连接到室内机和室外机的扩口螺母）插入管道，并使用扩口工具执行扩口工序。请使用专用的 R410A 扩口工具或传统的扩口工具。如果使用其它扩口螺母，会导致制冷剂泄漏。
(4) 请夹住或用胶带保护管道，防止灰尘、污物或水进入管道。

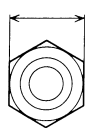






管道外径 [mm (in.)]	尺寸 A [mm]	尺寸 $B^{0}_{-0.4}$ [mm]
	R410A的扩口工具，离合式	
6.35 (1/4)	0至0.5	9.1
9.52 (3/8)		13.2
12.70 (1/2)		16.6
15.88 (5/8)		19.7
19.05 (3/4)		24.0

当使用传统的扩口工具对 R410A 管道进行扩口时，尺寸 A 应比表中（针对使用 R410A 扩口工具进行扩口）所示的尺寸大约 0.5 mm 以获得指定的扩口。使用厚度测量仪测量尺寸 A。



管道外径 [mm (in.)]	扩口螺母的扳手开口宽度 [mm]
6.35 (1/4)	17
9.52 (3/8)	22
12.70 (1/2)	26
15.88 (5/8)	29
19.05 (3/4)	36

4.3.2. 弯管加工

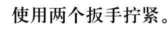
• 用手或弯管器使管道成形。注意请勿将它们压扁。
• 弯曲管道时角度不应超过90˚。
• 如果反复弯曲或拉伸管道，材料将变硬，以至很难再次弯曲或拉伸。弯曲或拉伸管道的次数不应超过三次。

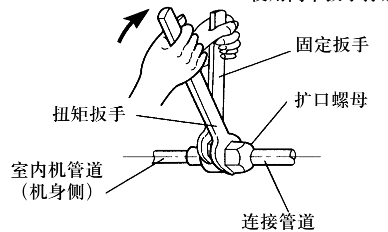
⚠ 注意
• 为了防止管道破裂，应避免过度的弯曲。
• 如果管道在同一位置反复弯曲，它会破裂。

4.3.3. 管道连接

用手正确地拧紧扩口螺母时，用单独的扳手按住机身侧沟槽连接件，然后用扭矩扳手拧紧。

⚠ 注意
• 握住扭矩扳手的手柄，使其与管道成 90 度，以便顺利地拧紧扩口螺母。
• 按照指定的拧紧方法，用扭矩扳手拧紧扩口螺母。 否则长时间以后，扩口螺母会破裂，导致制冷剂泄漏，如果制冷剂与火焰接触，还会产生有害气体。



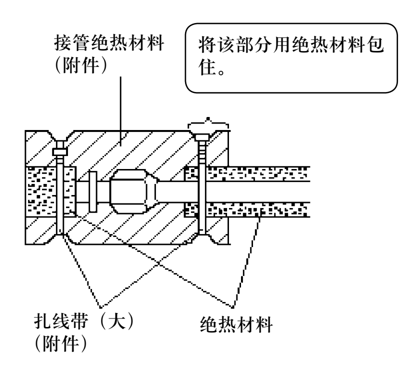


⚠ 注意
• 务必要将管道与室内机的接口正确连接。如果没有对齐，扩口螺母将无法顺利紧固。如果强行旋转扩口螺母，将损坏螺纹。
• 只有在对连接管道进行连接之前才能从室内机管道上拆除扩口螺母。
• 请勿在扩口部件上使用矿物油。防止矿物油进入系统，因为这样会降低机组的寿命。

扩口螺母[mm (in.)]	拧紧扭矩[N·m (kgf·cm)]
直径 6.35 (1/4)	16至18 (160至180)
直径 9.52 (3/8)	32至42 (320至420)
直径 12.70 (1/2)	49至61 (490至610)
直径 15.88 (5/8)	63至75 (630至750)
直径 19.05 (3/4)	90至110 (900至1,100)

4.4. 安装绝热材料

请在完成制冷剂泄漏检查后安装管接头绝热材料（有关详细信息，请参见室外机的安装说明书）。

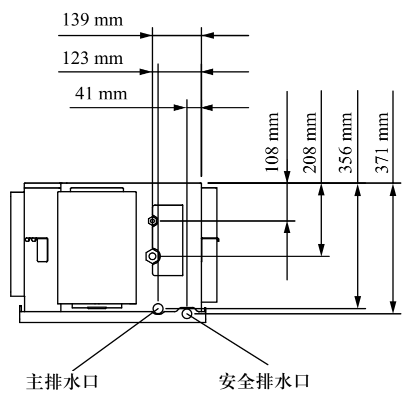


⚠ 注意
• 绝热材料与产品之间不得有间隙。

5. 安装排水软管

• 使用普通的硬聚氯乙烯管（VP25）并使用不干胶（聚氯乙烯）连接，确保其没有泄漏。
• 排水管的安装位置应有至少 1/100 的向下坡度。
• 为防止管子冻结，请根据需要使用绝热材料。

排水管的位置



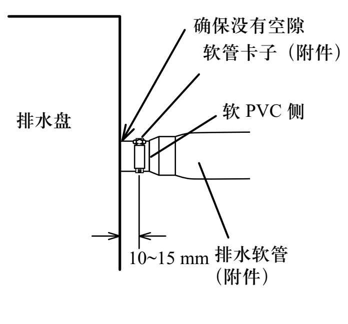
	外径
排水管 • 用于主排水口 • 用于安全排水口	32 mm (VP25)

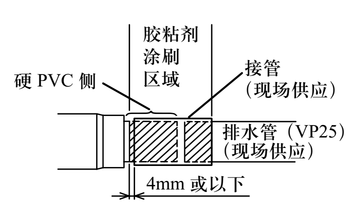
• 本产品有两处排水口。请按照图中所示步骤将排水软管和排水管连接到各排水口。

将排水软管安装到主排水口和安全排水口

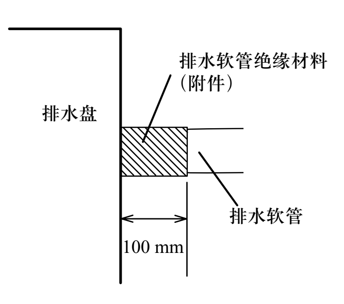
操作步骤

(1) 将附带的排水软管安装在机体的主排水口和安全排水口上。在图形显示区域内从软管的顶部安装软管卡子。 请用软管夹箍牢牢地固定。
(2) 用乙稀胶粘剂粘合在现场准备的排水管（PVC 管 VP25）或管道插槽。（在规线和密封件之前均匀地涂有色胶粘剂）
(3) 检查排水情况。
(4) 安装绝热材料。
(5) 用附带的绝热材料对机体的排水口和卡子部分进行绝热。



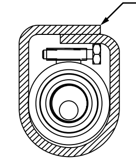


将排水软管绝缘材料缠裹在排水软管连接处的四周。

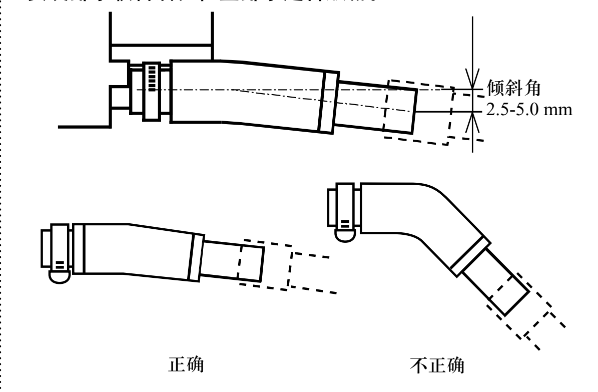


软管剖开视图

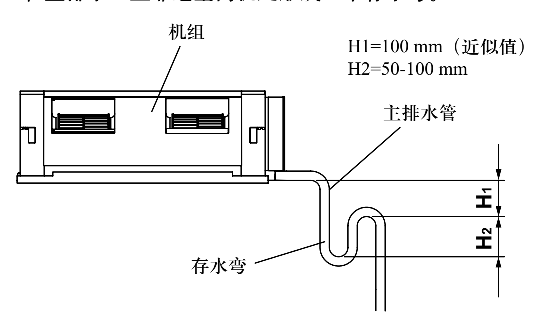
将附带的绝热材料缠在软管卡子上。
确保调整部分位于顶部。



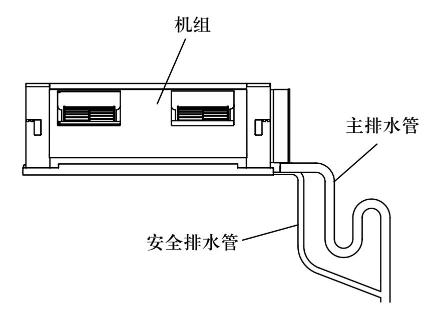
安装排水软管后，检查排水是否顺畅。



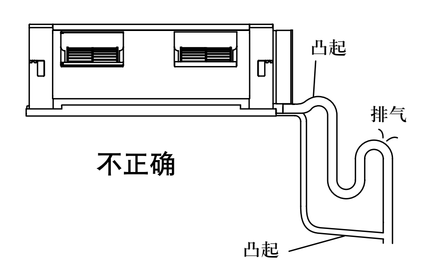
① **主排水口**
在主排水口上靠近室内机处形成一个存水弯。



② **安全排水口**
安全排水口不需要有存水弯。如果将安全排水口连接到主排水口，则应在主存水弯以下连接。



- 安装排水管时不得有立管。
- 请勿执行排气操作。



⚠ 注意
• 必须对排水管进行正确绝热。
• 确保可以正常排水。

6. 电气接线

⚠ 警告
• 必须由持有证书的人员根据国家或地方法规并按照本说明书执行电气作业。务必使用机组专用的电路。电源电路供电不足或不当的电气作业可能会导致如电击或火灾的严重事故。
• 开始工作前，检查室内机和室外机是否没有通电。
• 使用附带的连接线和电源线，或者制造商指定的线缆。连接不当、绝缘不充分或者超出了允许的电流限制可能会导致电击或火灾。
• 对于接线，使用指定类型的电线，将其牢固连接，并确保电线的外力没有施加到接线端子上。电线连接或紧固不当可能会导致如端子过热、电击或火灾的严重事故。
• 请勿改装电源线、使用延长线或者使用接线中的任何支线。连接不当、绝缘不充分或者超出了允许的电流限制可能会导致电击或火灾。
• 将接线板号码与室外机上的连接线颜色相匹配。错误的接线可能会导致电气部件烧毁。
• 将连接线牢靠地连接到端子板。此外，使用接线座紧固电线。如果接线内或端部连接不当，可能会导致故障、电击或火灾。
• 必须用线夹固定连接线的绝缘层。（如果绝缘层未被夹住，可能会发生漏电。）
• 在机组上牢固地安装电气盒盖。电气盒盖安装不当可能会因暴露于灰尘或水而导致如电击或火灾的严重事故。
• 在用于接线的墙壁开孔中安装套管。否则，可能会导致短路。
• 安装接地漏电断路器。此外，安装接地漏电断路器，以便同时切断整个 AC 主电源。否则，可能会导致电击或火灾。
• 安装接地漏电断路器。 如果未安装接地漏电断路器，可能会导致电击或火灾。
• 必须连接地线。 不当的接地工作可能会导致电击。
• 安装遥控器电线时，要确保不会用手直接触摸到。
• 按照标准进行接线工作，以便空调器可以安全无故障地运行。
• 将连接电缆牢固地连接在接线板上。不正确的安装可能会导致火灾。

⚠ 注意
• 将机组接地。 请勿将地线连接到气体管、水管、避雷针或电话地线。 不适当的接地可能造成电击。
• 请勿将电源线连接到信号线或遥控器接线端，因为这会损坏该产品。
• 绝不要将电源线和信号线束在一起。将这些线束在一起会导致错误运行。

- 操作 PCB 时，机身上的静电可能造成控制 PCB 发生故障。请遵循下列注意事项：
  - 对室内和室外机组以及外围设备使用接地线。
  - 切断电源（断路器）。
  - 请触摸室内和室外机组金属部分 10 秒以上，以释放机身静电。
  - 请勿触碰接线 PCB 上的部件端子和布线模式。

6.1. 电气要求

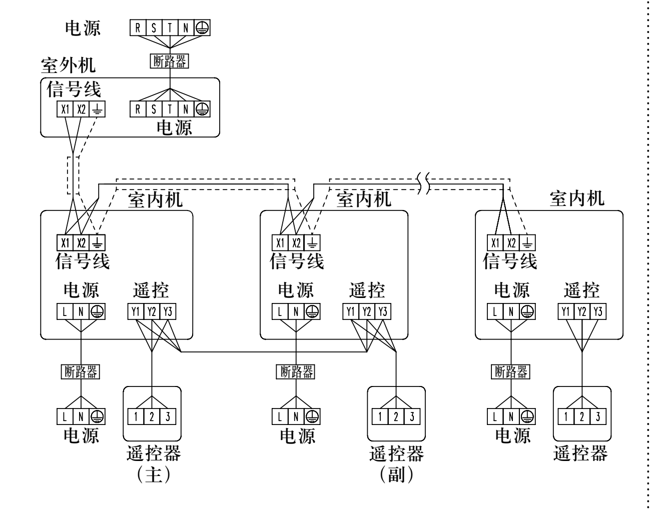
额定电压	230 V
操作范围	198 - 264 V

	电缆尺寸推荐值 (mm²)	电线类型	备注
电源线	2.5	245 IEC57 或相当品	1ø 50 Hz 198 - 264 V 2 电线 + 地线
信号线	0.33	LONWORKS 兼容线	22 AWG LEVEL 4 (NEMA) 非极性双芯双绞实芯线，直径 0.65 mm
遥控器线	0.33	聚氯乙烯外皮电缆 *	极性 3 芯双绞线

*: 根据当地规则，对遥控器使用屏蔽电缆。

6.2. 接线方法

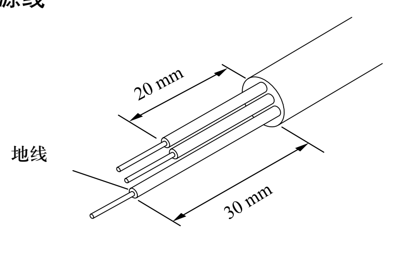
(示例)



6.3. 机组连线

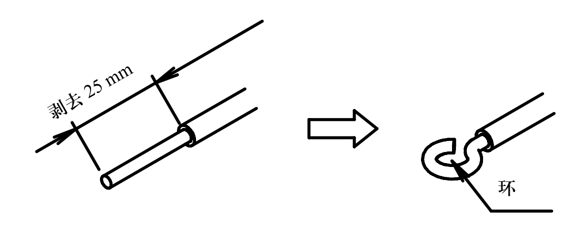
- 将电线连接到接线板之前。

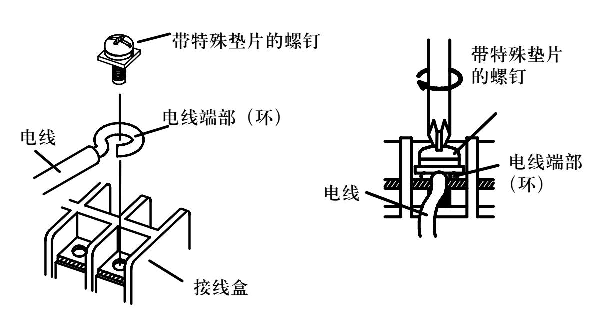
6.3.1. 电源线



A. 对于实芯接线

(1) 要连接电端子，请将电线在端部结环后根据下图进行连接。
(2) 用指定的电线连接牢固，然后拧紧，保持端子上没有张力。
(3) 使用适当的螺丝刀拧紧端子螺钉。不要使用过小的螺丝刀，否则，螺钉头可能会被损坏并且无法将螺钉正确拧紧。
(4) 不要过分拧紧端子螺钉，否则螺钉可能会断裂。
(5) 请参见表中的端子螺钉拧紧扭矩。
(6) 请不要用一颗螺丝固定两根电源线。



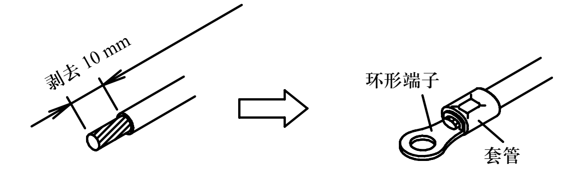


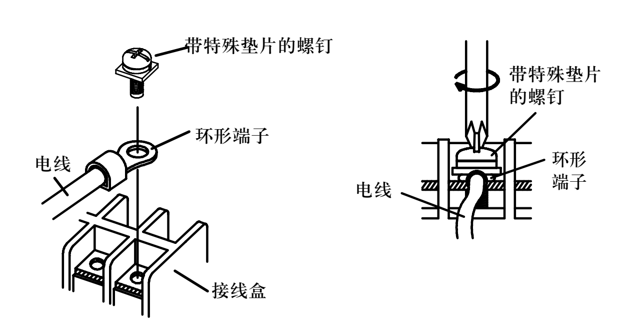
⚠ 警告

- 使用实芯电线时，请勿使用环形端子。如果使用带有环形端子的实芯电线，环形端子的气压粘结可能会发生故障并导致电线异常发热。

B. 对于绞合线

(1) 如下图所示，用带绝缘套管的环形端子连接到接线盒。
(2) 用适当的工具将环形端子压紧到电线，不要让电线松脱。
(3) 用指定的电线连接牢固，然后拧紧，保持端子上没有张力。
(4) 使用适当的螺丝刀拧紧端子螺钉。不要使用过小的螺丝刀，否则，螺钉头可能会被损坏并且无法将螺钉正确拧紧。
(5) 不要过分拧紧端子螺钉，否则螺钉可能会断裂。
(6) 请参见表中的端子螺钉拧紧扭矩。
(7) 请勿对电源线进行分支接线。

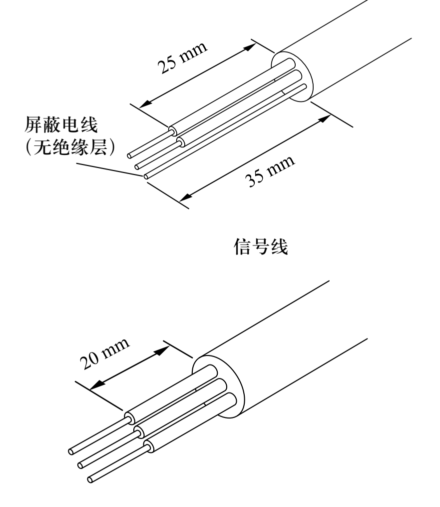




⚠ 警告
• 使用环形端子并将端子螺钉拧紧到指定的扭矩，否则可能会造成异常过热并可能造成机组内部严重损坏。

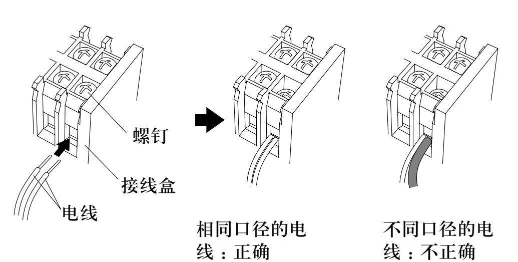
拧紧扭矩	
M4 螺钉 （电源 /L, N, GND）	1.2 至 1.8 N · m (12 至 18 kgf · cm)

6.3.2. 信号线和遥控器线



- 如图 B 所示连接遥控和信号线。
- 连接两根电线时。

图 B



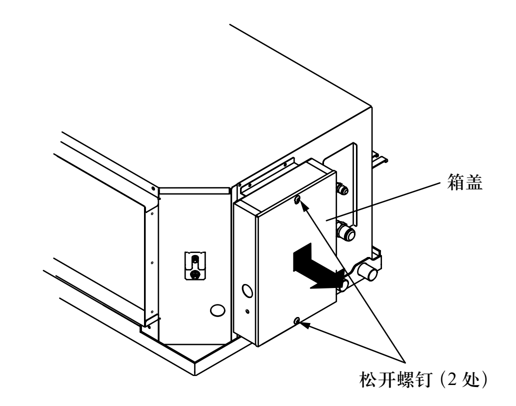
⚠ 警告
• 将端子螺钉拧紧到指定的扭矩，否则可能会造成异常过热并可能造成机组内部严重损坏。

拧紧扭矩	
M3.5 螺钉 （传输 /X1, X2） （遥控器 /Y1, Y2, Y3）	0.8 至 1.0 N · m (8 至 10 kgf · cm)

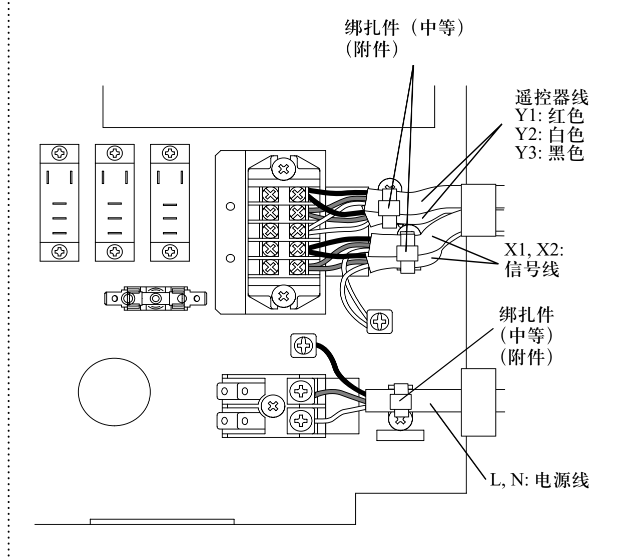
⚠ 注意
• 要剥去引线上的绝缘层，请使用不会损坏导线的专用工具。
• 在接线盒上安装螺钉时，请勿过度拧紧螺钉而折断电线。同时，过度拧紧的螺钉可能造成错误接触，从而导致通信故障。

6.4. 线路的连接

(1) 卸下控制箱盖并安装每条连接线。



(2) 接线完成后，用绑扎件夹住遥控器线、信号线和电源线。



⚠ 注意
• 将螺丝安装在接线盒上时，不要过分拧紧螺丝而将电线剪断。另一方面，未充分拧紧的螺丝可能会造成错误的接触，从而导致通信故障。

(3) 固定控制箱盖。

7. 现场设置

- 要设置现场设置地址，请参考下列 3 个项目。以下包括了相应的设置。

(1) IU AD, REF AD SW 设置......... 本部分内容

(2) 遥控器设置 .... 有关详细的设置信息，请参阅有线或无线遥控器的说明书。(将 IU AD, REF AD SW 设为 0)

(3) 自动地址设置 .... 有关详细的设置信息，请参阅室内机的说明书。(将 IU AD, REF AD SW 设为 0)

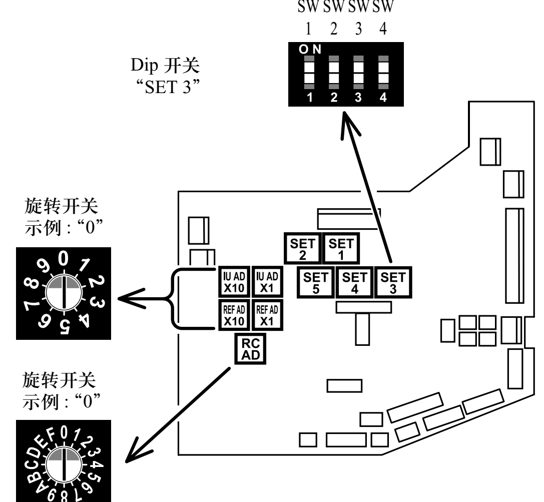
⚠ 注意
• 在执行现场设置之前，请确保切断电源。

7.1. 设置地址

手动地址设置方法

- 则也可以通过无线遥控器来设置室内机地址和制冷剂地址。

⚠ 注意
• 请使用绝缘螺丝刀来设置 DIP 开关。



设置	设置范围	开关类型
室内机地址	0–63	设置示例 2 / IU AD × 10 / IU AD × 1
制冷剂回路地址	0–99	设置示例 63 / REF AD × 10 / REF AD × 1

(1) 室内机地址

旋转开关 (IU AD × 1).............. 出厂设置“0”

旋转开关 (IU AD × 10)............ 出厂设置“0”

将多台室内机连接到一个制冷剂系统时，请参见表 A 中 IU AD SW 处的地址。

(2) 制冷剂回路地址

旋转开关 (REF AD × 1).............. 出厂设置“0”

旋转开关 (REF AD × 10)............ 出厂设置“0”

在有多个制冷剂系统的情况下，请按表 A 所示为每个制冷剂系统设置 REF AD SW。

设置为与室外机相同的制冷剂回路地址。

表 A

地址	旋转开关设置		地址	旋转开关设置	
制冷剂回路	REF AD SW		室内机	IU AD SW	
	× 10	× 1		× 10	× 1
0	0	0	0	0	0
1	0	1	1	0	1
2	0	2	2	0	2
3	0	3	3	0	3
4	0	4	4	0	4
5	0	5	5	0	5
6	0	6	6	0	6
7	0	7	7	0	7
8	0	8	8	0	8
9	0	9	9	0	9
10	1	0	10	1	0
11	1	1	11	1	1
12	1	2	12	1	2
⋮	⋮	⋮	⋮	⋮	⋮
99	9	9	63	6	3

请勿在 64 至 99 之间设定室内机地址（IU AD SW）。否则可能会导致故障。

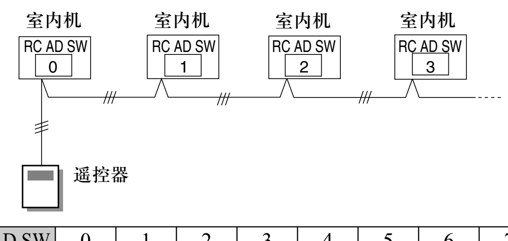
(3) 遥控器地址

旋转开关 (RC AD SW)............ 出厂设定为“0”

将多台室内机连接到一个标准有线遥控器时，请从 0 开始顺次设置 RC AD SW 处的地址。

设置	设置范围	开关类型
遥控器地址	0–15	设置示例 0 / RC AD

示例　如果安装了 4 台室内机。



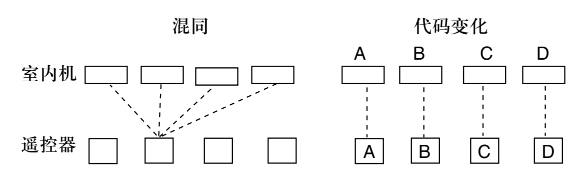
RC AD SW	0	1	2	3	4	5	6	7
地址	0	1	2	3	4	5	6	7

RC AD SW	8	9	A	B	C	D	E	F
地址	8	9	10	11	12	13	14	15

7.2. 用户代码设置

选择用户代码可以防止室内机信号混同。(图 B)
(可以设置多达 4 个代码)
为室内机和遥控器执行该设置。

图 B



• 室内机的用户代码设置

参考表 B 设置 DIP SW SET 3 SW1, SW2。

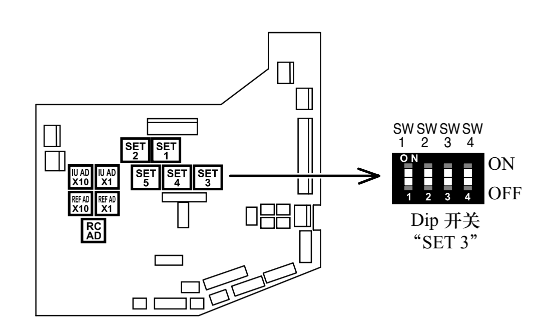


表 B

	用户代码			
	A (出厂设置)	B	C	D
DIP SW SET 3 SW1	OFF	ON	OFF	ON
DIP SW SET 3 SW2	OFF	OFF	ON	ON

7.3. 功能设置

- 可以使用有线或无线遥控器执行功能设置。
(遥控器为选购设备)
- 有关详细的设置信息，请参阅有线或无线遥控器的说明书。
(将 IU AD, REF AD SW 设为 0)
- 有关室内机地址和制冷剂回路地址设置，请参阅“7.1 设置地址”。
- 开始设置之前，请打开室内机的电源。

* 打开电源时，室内机初始化 EEV，所以请确保在打开电源之前已执行了管道气密性测试和抽真空作业。
* 打开电源前，请再次检查以确保没有接线错误。

功能详情

功能	功能号码	设置号码		默认设置	说明
过滤网指示器间隔	11	00	默认设置	○	调整过滤网清洁间隔通知。如果通知时间过早，请更改为设置01。如果通知时间过迟，请更改为设置02。
		01	较长		
		02	较短		
过滤网指示器操作	13	00	启用	○	启用或禁用过滤网指示器。设置02适用于中央遥控。
		01	禁用		
		02	仅在中央遥控器上显示		
水平摆动气流方向	24	00	默认设置	○	调整水平摇摆气流方向。(适用于带有水平摇摆功能的机型)
		01	左半区		
		02	右半区		
冷空气温度触发	30	00	默认设置	○	调节冷空气触发温度。要降低触发温度，使用设置01。要提高触发温度，使用设置02。
		01	调节 (1)		
		02	调节 (2)		
热空气温度触发	31	00	默认设置	○	调节热空气触发温度。要降低触发温度6摄氏度，使用设置01。要降低触发温度4摄氏度，使用设置02。要提高触发温度，使用设置03。
		01	调节 (1)		
		02	调节 (2)		
		03	调节 (3)		
自动重新启动	40	00	启用		电源中断后，启用或禁用自动系统重新启动。
		01	禁用	○	
外部控制	46	00	开始 / 停止	○	允许外部控制器启动或停止系统，或者执行紧急关机。* 如果从外部控制器执行紧急关机，将禁用所有制冷剂系统。
		01	紧急停止		
故障报告对象	47	00	所有	○	更改报告故障的对象。可以在所有位置报告故障，也可以只在有线遥控器上报告故障。
		01	仅在中央遥控器上显示		

8. 试运行

8.1. 使用 PCB 进行试运转（室外机）

- 如果使用室外机的 PCB 来进行试运转，请参考本安装说明书了解室外机。

8.2. 使用遥控器进行试运转

- 要使用无线遥控器来进行试运转，请参考遥控器的安装说明书。
- 对空调器进行试运转时，运转和定时器指示灯同时缓慢地闪烁。

详情请参阅“IR 接收器”或“遥控器（有线式）”的安装说明书。

9. 检查项目表

安装室内机（组）时，请特别注意以下的检查项目。安装完成后，请确保再次检查以下的检查项目。

检查项目	如果未正确执行	检查框
正确地安装了室内机了吗？	振动，噪音，室内机可能掉落	
已检查气体泄漏（制冷剂管道）了吗？	无制冷，无制热	
已完成绝热工作了吗？	漏水	
室内机组排水容易吗？	漏水	
电源电压与室内机标签上显示的相同吗？	不运转，发热或烧坏	
电线和管道全都连接正确吗？	不运转，发热或烧坏	
室内机接地了吗？	短路	
连接电缆具有规定的粗细吗？	不运转，发热或烧坏	
保持进口和出口无阻塞物了吗？	无制冷，无制热	
安装完成后，向用户说明正确的操作和处理了吗？	————————	

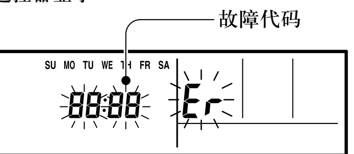
10. 故障代码

如果您使用有线型遥控器，则故障代码将显示在遥控器的显示屏上。如果您使用无线遥控器，机组上的指示灯将通过各种闪烁的组合输出故障代码。请参阅下表中的指示灯闪烁组合和故障代码。

故障显示			有线遥控器故障代码	故障内容
运转指示灯（绿色）	定时器指示灯（橙色）	过滤网指示灯（红色）		
●(1)	● (2)	◇	12	遥控器通信故障
●(1)	●(4)	◇	14	网络通信故障
●(1)	●(6)	◇	16	并行通信故障
●(3)	●(1)	◇	31	电源频率异常
●(3)	●(2)	◇	32	型号信息异常 /EEPROM 存取故障
●(4)	●(1)	◇	41	室温热敏电阻故障
●(4)	●(2)	◇	42	室内机热交换器热敏电阻故障
●(5)	●(1)	◇	51	室内机风扇故障
●(5)	●(3)	◇	53	排水异常
●(9)	●(15)	◇	9U	室外机故障

显示模式　●：亮 0.5 秒 / 灭 0.5 秒
◇：亮 0.1 秒 / 灭 0.1 秒
( )：闪烁次数

有线遥控器显示



有关指示灯闪烁的详细标记方法，请参阅“IR 接收器”或“遥控器（有线式）”的安装说明书。



VRF SYSTEM
INDOOR UNIT
Duct Type



REFRIGERANT

This Air Conditioner contains and operates with refrigerant R410A.

THIS PRODUCT MUST ONLY BE INSTALLED OR SERVICED BY QUALIFIED PERSONNEL.

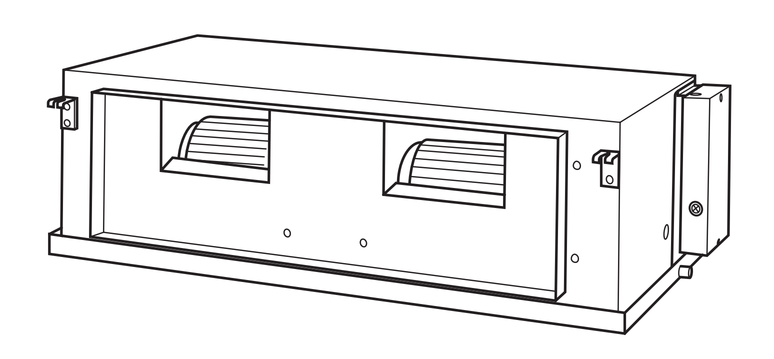
Refer to Commonwealth, State, Territory and local legislation, regulations, codes, installation & operation manuals, before the installation, maintenance and/or service of this product.

English

中文

INSTALLATION MANUAL

For authorized service personnel only.



Contents

PART NO. 9365748077-02

1. SAFETY PRECAUTIONS

- Be sure to read this Manual thoroughly before installation.
- The warnings and precautions indicated in this Manual contain important information pertaining to your safety. Be sure to observe them.
- Hand this Manual, together with the Operating Manual, to the customer. Request the customer to keep them on hand for future use, such as for relocating or repairing the unit.

⚠ WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.

- Request your dealer or a professional installer to install the indoor unit in accordance with this Installation Manual. An improperly installed unit can cause serious accidents such as water leakage, electric shock, or fire. If the indoor unit is installed in disregard of the instructions in the Installation Manual, it will void the manufacturer's warranty.
- Do not turn ON the power until all work has been completed. Turning ON the power before the work is completed can cause serious accidents such as electric shock or fire.
- If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.
- Installation work must be performed in accordance with national wiring standards by authorized personnel only.

⚠ CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

2. ABOUT THE UNIT

2.1. Precautions for using R410A refrigerant

⚠ WARNING

- Do not introduce any substance other than the prescribed refrigerant into the refrigeration cycle. If air enters the refrigeration cycle, the pressure in the refrigeration cycle will become abnormally high and cause the piping to rupture.
- If there is a refrigerant leak, make sure that it does not exceed the concentration limit. If a refrigerant leak exceeds the concentration limit, it can lead to accidents such as oxygen starvation.
- Do not touch refrigerant that has leaked from the refrigerant pipe connections or other area. Touching the refrigerant directly can cause frostbite.
- If a refrigerant leak occurs during operation, immediately vacate the premises and thoroughly ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.

2.2. Special tool for R410A

⚠ WARNING

- To install a unit that uses R410A refrigerant, use dedicated tools and piping materials that have been manufactured specifically for R410A use. Because the pressure of R410A refrigerant is approximately 1.6 times higher than the R22, failure to use dedicated piping material or improper installation can cause rupture or injury. Furthermore, it can cause serious accidents such as water leakage, electric shock, or fire.

Tool name	Changes
Gauge manifold	The pressure in the refrigerant system is extremely high and cannot be measured with a conventional gauge. To prevent erroneous mixing of other refrigerants, the diameter of each port has been changed. It is recommended to use a gauge manifold with a high pressure display range of –0.1 to 5.3 MPa and a low pressure display range of –0.1 to 3.8 MPa.
Charging hose	To increase pressure resistance, the hose material and base size were changed. (The charging port thread diameter for R410A is 1/2 UNF 20 threads per inch.)
Vacuum pump	A conventional vacuum pump can be used by installing a vacuum pump adapter. Be sure that the pump oil does not backflow into the system. Use one capable for vacuum suction of –100.7 kPa (5 Torr, –755 mmHg).
Gas leakage detector	Special gas leakage detector for R410A refrigerant.

2.3. Accessories

⚠ WARNING

- For installation purposes, be sure to use the parts supplied by the manufacturer or other prescribed parts. The use of non-prescribed parts can cause serious accidents such as the unit falling, water leakage, electric shock, or fire.

- The following installation parts are furnished. Use them as required.
- Keep the Installation Manual in a safe place and do not discard any other accessories until the installation work has been completed.

Name and Shape	Q'ty	Application
Operating Manual	1	
Installation Manual	1	(This book)
Binder (Large)	4	For fixing the connection pipe (Large and Small)
Binder (Medium)	3	For power supply and transmission and remote control cable binding
Coupler heat insulation (Small)	1	For indoor side pipe joint (Small)
Coupler heat insulation (Large)	1	For indoor side pipe joint (Large)
Relay wire	1	For switching static pressure
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	
Washer	8	
Drain hose (Large)	1	For installing drain pipe (For main drain port)
Drain hose (Small)	1	For installing drain pipe (For safety drain port)
Hose Band (Large)	1	For installing drain hose (Large)
Hose Band (Small)	1	For installing drain hose (Small)
Drain hose insulation	2	For installing drain hose

3. INSTALLATION WORK

Especially, the installation place is very important for the split type air conditioner because it is very difficult to move from place to place after the first installation.

3.1. Selecting an installation location

Decide the mounting position together with the customer as follows.

⚠ WARNING

- Select installation locations that can properly support the weight of the indoor unit. Install the units securely so that they do not topple or fall.

⚠ CAUTION

Do not install the indoor unit in the following areas:
- Area with high salt content, such as at the seaside. It will deteriorate metal parts, causing the parts to fall or the unit to leak water.
- Area filled with mineral oil or containing a large amount of splashed oil or steam, such as a kitchen. It will deteriorate plastic parts, causing the parts to fall or the unit to leak water.
- Area that generates substances that adversely affect the equipment, such as sulfuric gas, chlorine gas, acid, or alkali. It will cause the copper pipes and brazed joints to corrode, which can cause refrigerant leakage.
- Area that can cause combustible gas to leak, contains suspended carbon fibers or flammable dust, or volatile inflammables such as paint thinner or gasoline. If gas leaks and settles around the unit, it can cause a fire.
- Area where animals may urinate on the unit or ammonia may be generated.

- Do not use the unit for special purposes, such as storing food, raising animals, growing plants, or preserving precision devices or art objects.
  It can degrade the quality of the preserved or stored objects.

- Do not install where there is the danger of combustible gas leakage.

- Do not install the unit near a source of heat, steam, or flammable gas.

- Install the unit where drainage does not cause any trouble.

- Install the indoor unit, outdoor unit, power supply cable, transmission cable, and remote control cable at least 1 m away from a television or radio receivers. The purpose of this is to prevent TV reception interference or radio noise. (Even if they are installed more than 1 m apart, you could still receive noise under some signal conditions.)

- If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

- Take precautions to prevent the unit from falling.

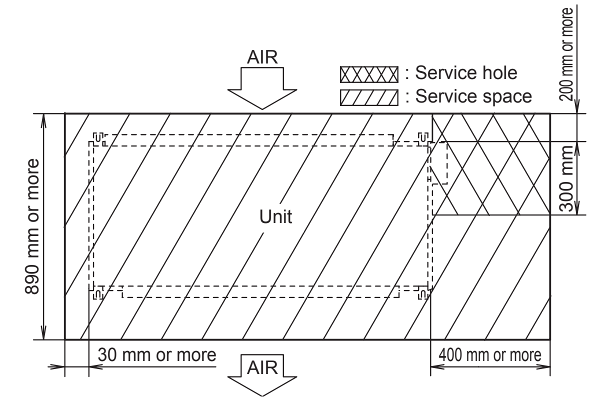
(1) Install the indoor unit on a place having a sufficient strength so that it withstands against the weight of the indoor unit.
(2) The inlet and outlet ports should not be obstructed; the air should be able to blow all over the room.
(3) Leave the space required to service the air conditioner.
(4) Install the unit where connection to the outdoor unit is easy.
(5) Install the unit where the connection pipe can be easily installed.

(6) Install the unit where the drain pipe can be easily installed.
(7) Install the unit where noise and vibrations are not amplified.
(8) Take servicing, etc., into consideration and leave the spaces. Also install the unit where the filter can be removed.
(9) Do not install the unit where it will be exposed to direct sunlight.

3.2. Installation dimension

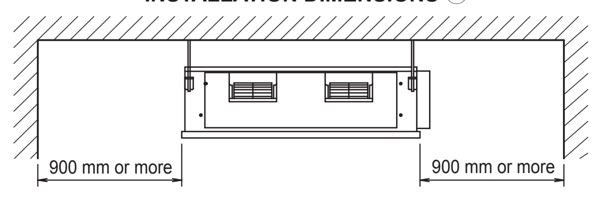
Provide a service hole for inspection purposes as shown below.
Do not place any wiring or illumination in the service space, as they will impede service.

INSTALLATION DIMENSIONS ①



If the service space shown in Fig. INSTALLATION DIMENSIONS ① is unavailable, provide a 900 mm service space at either the left or right side of the unit as shown below. Do not place any wiring or illumination in this space.

INSTALLATION DIMENSIONS ②



3.3. Installation the unit

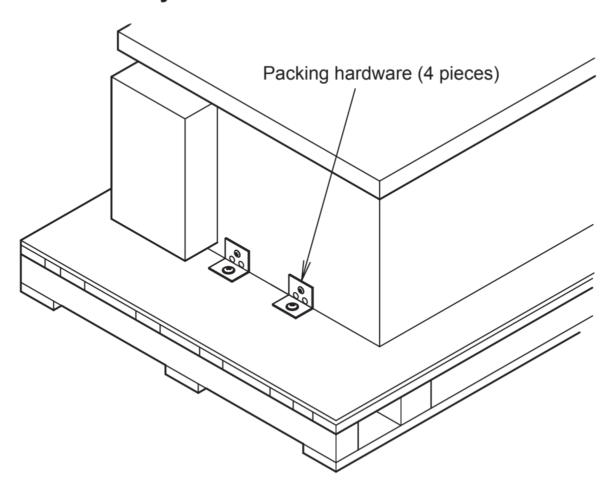
⚠ WARNING

- Install the air conditioner in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration. If the installation location is not strong enough, the indoor unit may fall and cause injuries.

⚠ CAUTION

- Confirm the directions of the air intake and outlet before installing the unit.
  The unit takes in air from the evaporator side, and expels it from the fan side.

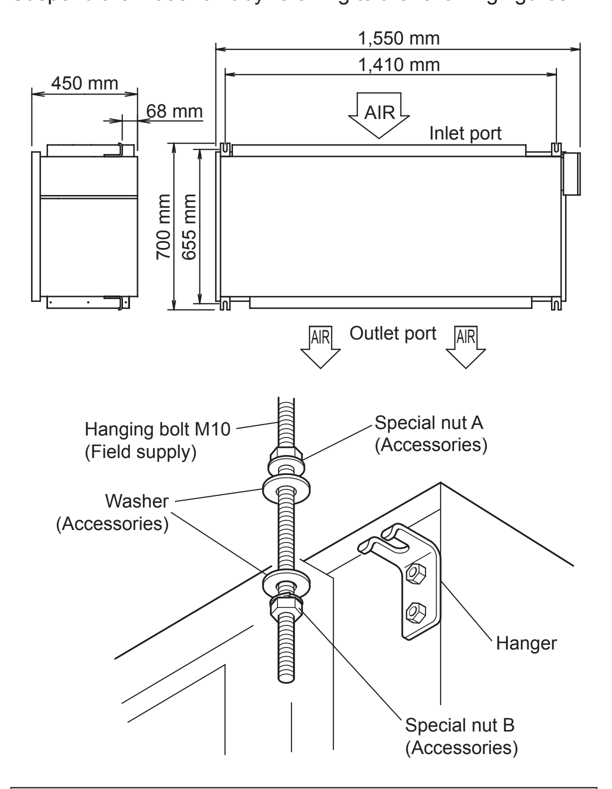
3.3.1. Conveyance method



Leave the packing materials on until the unit is at the installation site.
Remove the packing hardware and dispose of it.

3.3.2. Installing hangers

Suspend the indoor unit by referring to the following figures.

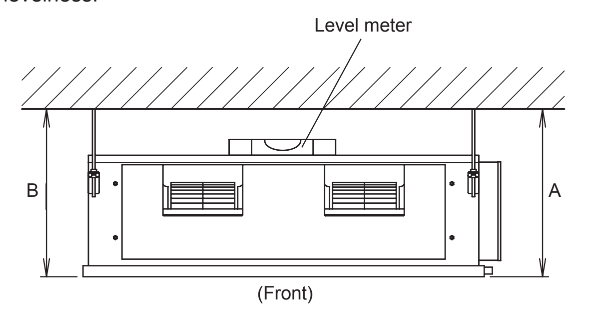


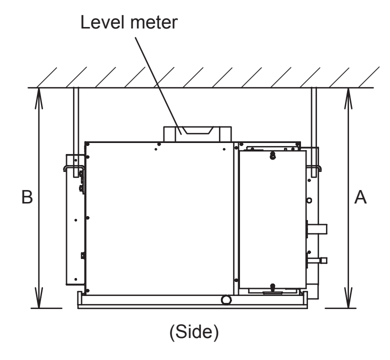
⚠ CAUTION

- Fasten the unit securely with special nuts A and B.

3.3.3. Leveling

Use the procedure in the following figure to adjust the levelness.

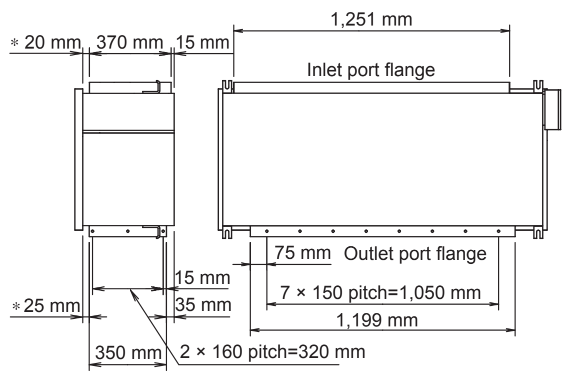




The side of the unit that holds the drain port Ⓐ should be slightly lower than the opposite side of the unit Ⓑ. The slant should allow from 0 to 20 mm of difference between Ⓐ and Ⓑ.

3.3.4. Mounting the duct

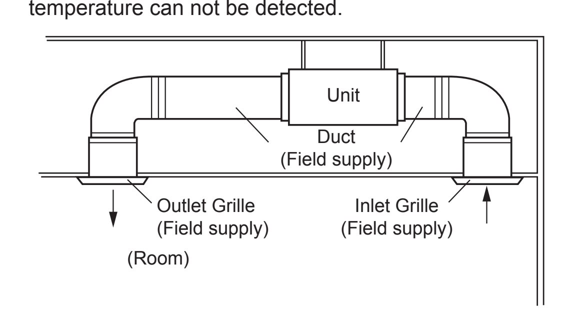
Follow the procedure in the following figure to install the ducts.



* Spacing between flange and drain pan.

⚠ CAUTION
• To prevent people from touching the parts inside the unit, be sure to install grilles on the inlet and outlet ports. The grilles must be designed in such a way that cannot be removed without tools.
• Set the external static pressure between 100 and 300 Pa.
• If an intake duct is installed, take care not to damage the temperature sensor (the temperature sensor is attached to the intake port flange).

• Install the air inlet grille for air circulation. The correct temperature can not be detected.



4. PIPE INSTALLATION

⚠ CAUTION
• Be more careful that foreign matter (oil, water, etc.) does not enter the piping than with refrigerant R410A models. Also, when storing the piping, securely seal the openings by pinching, taping, etc.
• While welding the pipes, be sure to blow dry nitrogen gas through them.

4.1. Selecting the pipe material

⚠ CAUTION
• Do not use existing pipes.
• Use pipes that have clean external and internal sides without any contamination which may cause trouble during use, such as sulfur, oxide, dust, cutting waste, oil, or water.
• It is necessary to use seamless copper pipes. Material : Phosphor deoxidized seamless copper pipes It is desirable that the amount of residual oil is less than 40 mg/10 m.
• Do not use copper pipes that have a collapsed, deformed, or discolored portion (especially on the interior surface). Otherwise, the expansion valve or capillary tube may become blocked with contaminants.
• Improper pipe selection will degrade performance. As an air conditioner using R410A incurs pressure higher than when using conventional refrigerant, it is necessary to choose adequate materials.

• Thicknesses of copper pipes used with R410A are as shown in the table.
• Never use copper pipes thinner than those indicated in the table even if they are available on the market.

Thicknesses of Annealed Copper Pipes (R410A)

Pipe outside diameter [mm (in.)]	Thickness [mm]
6.35 (1/4)	0.80
9.52 (3/8)	0.80
12.70 (1/2)	0.80
15.88 (5/8)	1.00
19.05 (3/4)	1.20

4.2. Pipe requirement

⚠ CAUTION
• Refer to the Installation Manual of the outdoor unit for description of the length of connecting pipe or for difference of its elevation.

• Use pipe with water-resistant heat insulation.

⚠ CAUTION
• Install heat insulation around both the gas and liquid pipes. Failure to do so may cause water leaks. Use heat insulation with heat resistance above 120 °C. (Reverse cycle model only) In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70 %, install heat insulation around the refrigerant piping. If the expected humidity level is 70-80 %, use heat insulation that is 15 mm or thicker and if the expected humidity exceeds 80 %, use heat insulation that is 20 mm or thicker. If heat insulation is used that is not as thick as specified, condensation may form on the surface of the insulation. In addition, use heat insulation with heat conductivity of 0.045 W/(m·K) or less (at 20 °C).

4.3. Flare connection (pipe connection)

4.3.1. Flaring

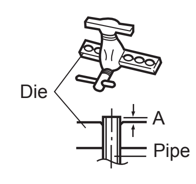
• Use special pipe cutter and flare tool exclusive for R410A.

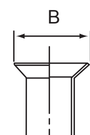
(1) Cut the connection pipe to the necessary length with a pipe cutter.

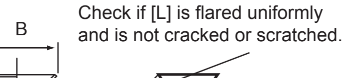
(2) Hold the pipe downward so that cuttings will not enter the pipe and remove any burrs.

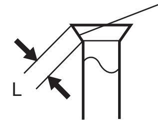
(3) Insert the flare nut (always use the flare nut attached to the indoor and outdoor units respectively) onto the pipe and perform the flare processing with a flare tool. Use the special R410A flare tool, or the conventional flare tool. Leakage of refrigerant may result if other flare nuts are used.

(4) Protect the pipes by pinching them or with tape to prevent dust, dirt, or water from entering the pipes.



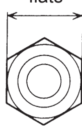






Pipe outside diameter [mm (in.)]	Dimension A [mm] Flare tool for R410A, clutch type	Dimension B $^{0}_{-0.4}$ [mm]
6.35 (1/4)	0 to 0.5	9.1
9.52 (3/8)		13.2
12.70 (1/2)		16.6
15.88 (5/8)		19.7
19.05 (3/4)		24.0

When using conventional flare tools to flare R410A pipes, the dimension A should be approximately 0.5 mm more than indicated in the table (for flaring with R410A flare tools) to achieve the specified flaring. Use a thickness gauge to measure the dimension A.



Pipe outside diameter [mm (in.)]	Width across flats of Flare nut [mm]
6.35 (1/4)	17
9.52 (3/8)	22
12.70 (1/2)	26
15.88 (5/8)	29
19.05 (3/4)	36

4.3.2. Bending pipes

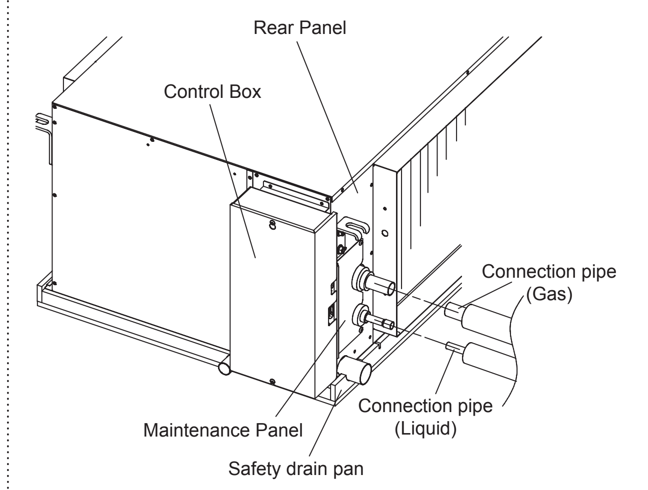
• The pipes are shaped by your hands or pipe bender. Be careful not to collapse them.
• Do not bend the pipes in an angle more than 90°.
• When pipes are repeatedly bend or stretched, the material will harden, making it difficult to bend or stretch them any more. Do not bend or stretch the pipes more than three times.

⚠ CAUTION
• To prevent breaking of the pipe, avoid sharp bends.
• If the pipe is bent repeatedly at the same place, it will break.

4.3.3. Pipe connection

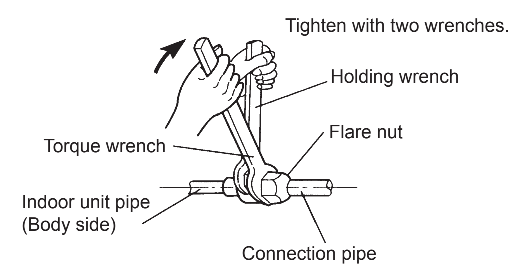
• The gas and liquid pipes connections must be brazed.
• Be sure to braze them before performing any wiring work or installing the drain pipe.

	Outer diameter of pipe
Liquid pipe	12.70 mm
Gas pipe	25.40 mm



When the flare nut is tightened properly by your hand, hold the body side coupling with a separate spanner, then tighten with a torque wrench.

⚠ CAUTION
• Hold the torque wrench at its grip, keeping it in the right angle with the pipe, in order to tighten the flare nut correctly.
• Tighten the flare nuts with a torque wrench using the specified tightening method. Otherwise, the flare nuts could break after a prolonged period, causing refrigerant to leak and generate a hazardous gas if the refrigerant comes into contact with a flame.



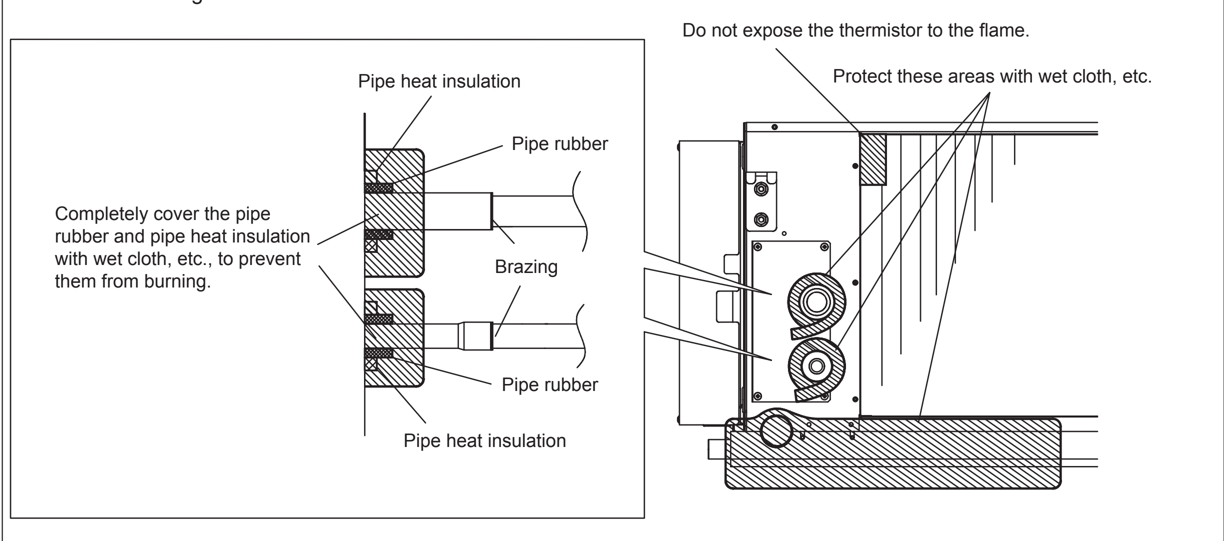
⚠ CAUTION

- Be sure to apply the pipe against the port on the indoor unit and the outdoor unit correctly. If the centering is improper, the flare nut cannot be tightened smoothly. If the flare nut is forced to turn, the threads will be damaged.
- Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.
- Do not use mineral oil on flared part. Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.

Flare nut [mm (in.)]	Tightening torque [N·m (kgf·cm)]
6.35 (1/4) dia.	16 to 18 (160 to 180)
9.52 (3/8) dia.	32 to 42 (320 to 420)
12.70 (1/2) dia.	49 to 61 (490 to 610)
15.88 (5/8) dia.	63 to 75 (630 to 750)
19.05 (3/4) dia.	90 to 110 (900 to 1,100)

⚠WARNING

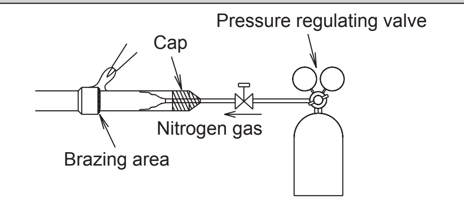
- Be sure to use wet cloth, etc., to protect the pipe rubber, pipe heat insulation, and the heat insulation of the safety drain pan as shown below. Because these parts are extremely flammable, they can cause a fire if they are not properly protected.
- The heat exchanger contains a thermistor.



- Do not expose the unit (control box, rear panel, maintenance panel, etc.) and the inlet grille to the flame. The exposure of these parts to the flame will adversely affect their appearance and functions or cause a fire.

⚠CAUTION

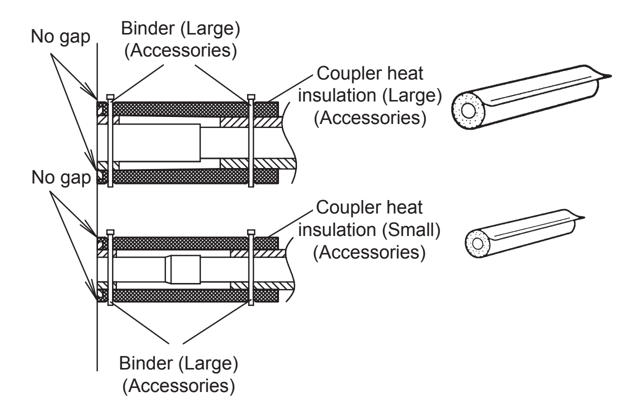
- If air or another type of refrigerant enters the refrigeration cycle, the internal pressure in the refrigeration cycle will become abnormally high and prevent the unit from exerting its full performance.
- Apply nitrogen gas while brazing the pipes. Nitrogen gas pressure: 0.02 MPa (= pressure felt sufficiently on the back of your hand)



- If a pipe is brazed without applying nitrogen gas, it will create an oxidation film. This can degrade performance or damage the parts in the unit (such as the compressor or valves).
- Do not use flux to braze pipes. If the flux is the chlorine type, it will cause the pipes to corrode. Furthermore, if the flux contains fluoride, it will adversely affect the refrigerant pipe system such as by degrading the refrigerant oil.
- For brazing material, use phosphor copper that does not require flux.

4.4. Installing heat insulation

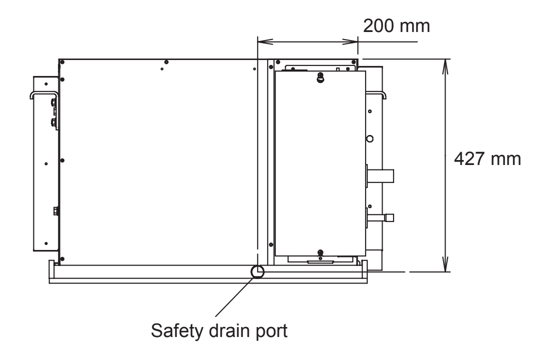
- Install the coupler heat insulation after completing the refrigerant leak check (for details, refer to the Installation Manual for the outdoor unit).
- There should be no gaps between the insulation and the product.

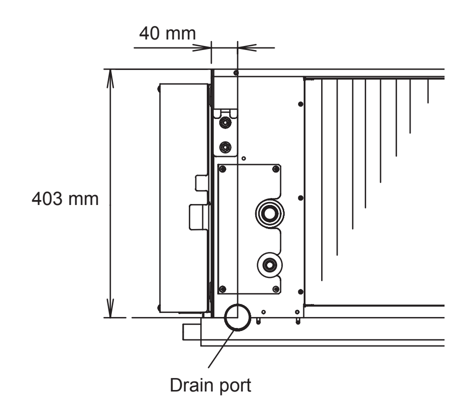


5. INSTALLING DRAIN PIPES

- Use general hard polyvinyl chloride pipe (VP25) and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- The position of the installed drain pipe should have a downward gradient of 1/100 or more.
- To prevent the pipe from freezing, use a heat insulation material as needed.

Position of drain piping





	O.D.
Drain pipe • For main drain port • For safety drain port	32 mm (VP25)

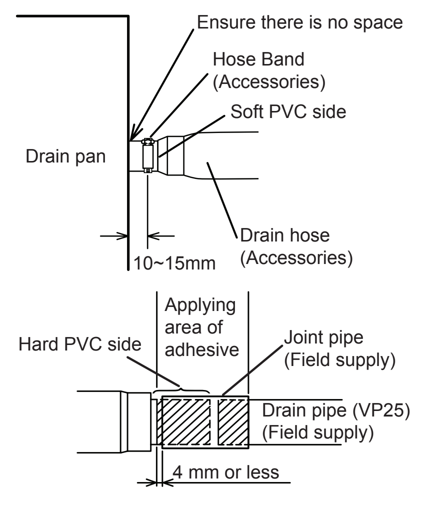
- This product has drain ports in two locations. Follow the procedure in the figure to connect drain hose and drain pipes to each of them.

INSTALL THE DRAIN HOSE TO THE MAIN AND SAFETY DRAIN PORT

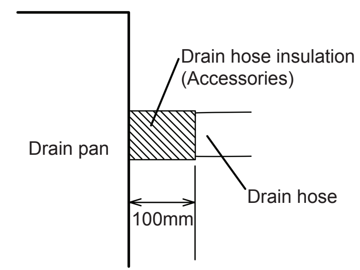
Working procedure

(1) Install the attached drain hose to the main and safety drain port of the body. Install the hose band from the top of the hose within the graphic display area. Secure firmly with the hose band.
(2) Use vinyl adhesive agent to glue the drain piping (PVC pipe VP25) which is prepared on site or piping socket. (Apply color adhesive agent evenly until the gauge line and seal)
(3) Check the drainage.
(4) Install the heat insulation.
(5) Use the attached heat insulation to insulate the drain port and band parts of the body.

	Accessories		
For main drain port	Drain hose (Large)	Hose band (Large)	Drain hose insulation
For safety drain port	Drain hose (Small)	Hose band (Small)	Drain hose insulation

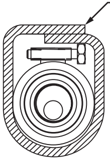


Wrap the Drain hose insulation around the drain hose connection.

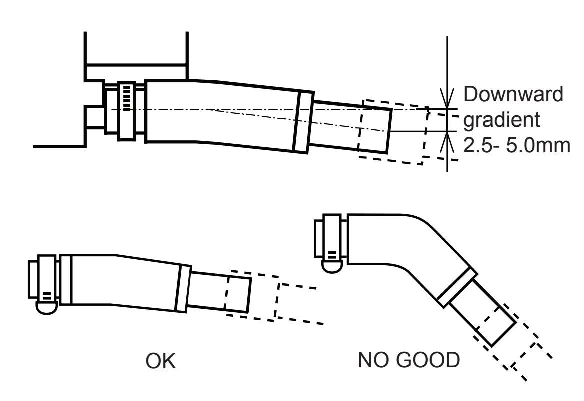


Hose opening view

Wind the attached heat insulation around the hose band. Make sure the alignment is on top.



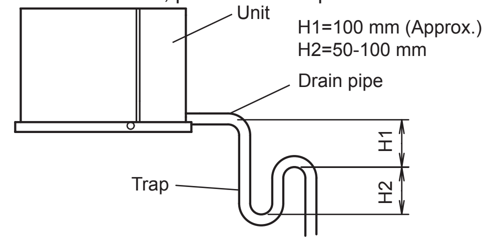
After installing the Drain hose, check if the drainage is smooth.



INSTALL THE DRAIN PIPE

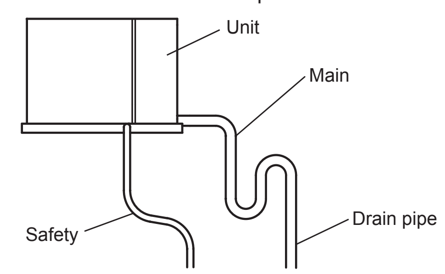
① **Main drain**

On the main drain, provide one trap near the indoor unit.

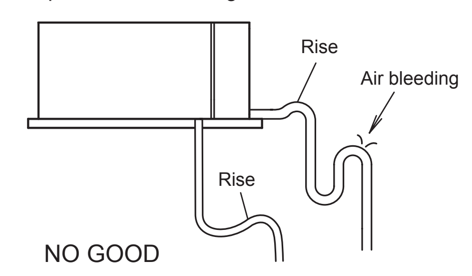


② **Safety drain**

There is no need to provide a trap for the safety drain. If the safety drain is connected to the main drain, make the connection below the main trap.



- Make sure that drain pipe is installed without rises.
- Do not perform air bleeding.



⚠ CAUTION
• Be sure to properly insulate the drain pipes.
• Make sure the drain water is properly drained.

6. ELECTRICAL WIRING

⚠ WARNING
• Electrical work must be performed in accordance with this Manual by a person certified under the national or regional regulations. Be sure to use a dedicated circuit for the unit. An insufficient power supply circuit or improperly performed electrical work can cause serious accidents such as electric shock or fire.
• Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
• Use the included connection cables and power cables or ones specified by the manufacturer. Improper connections, insufficient insulation, or exceeding the allowable current can cause electric shock or fire.
• For wiring, use the prescribed type of cables, connect them securely, making sure that there are no external forces of the cables applied to the terminal connections. Improperly connected or secured cables can cause serious accidents such as overheating the terminals, electric shock, or fire.
• Do not modify the power cables, use extension cables, or use any branches in the wiring. Improper connections, insufficient insulation, or exceeding the allowable current can cause electric shock or fire.
• Match the terminal board numbers and connection cable colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
• Securely connect the connection cables to the terminal board. In addition, secure the cables with wiring holders. Improper connections, either in the wiring or at the ends of the wiring, can cause a malfunction, electric shock, or fire.
• Always fasten the outside covering of the connection cable with the cable clamp. (If the insulator is chafed, electric leakage may occur.)
• Securely install the electrical box cover on the unit. An improperly installed electrical box cover can cause serious accidents such as electric shock or fire through exposure to dust or water.
• Install sleeves into any holes made in the walls for wiring. Otherwise, a short circuit could result.
• Install a ground leakage breaker. In addition, install the ground leakage breaker so that the entire AC main power supply is cut off at the same time. Otherwise, electric shock or fire could result.
• Install a ground leakage breaker. If a ground leakage breaker is not installed, it may cause electric shock or fire.
• Always connect the ground cable. Improper grounding work can cause electric shocks.
• Install the remote control cables so as not to be direct touched with your hand.
• Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
• Connect the connection cable firmly to the terminal board. Imperfect installation may cause a fire.

⚠ CAUTION
• Ground the unit. Do not connect the ground cable to a gas pipe, water pipe, lightning rod, or a telephone ground cable. Improper grounding may cause electric shock.
• Do not connect power supply cables to the transmission or remote control terminals, as this will damage the product.
• Never bundle the power supply cable and transmission cable together. Bundling these cables together will cause miss operation.
• When handling PCB, static electricity charged in the body may cause malfunction of the PCB. Follow the cautions below: • Establish a ground for the indoor and outdoor units and peripheral devices. • Cut power (breaker) off. • Touch metal part of the indoor and outdoor units for more than 10 seconds to discharge static electricity charged in the body. • Do not touch terminals of parts and patterns implemented on PCB.

6.1. Electrical requirement

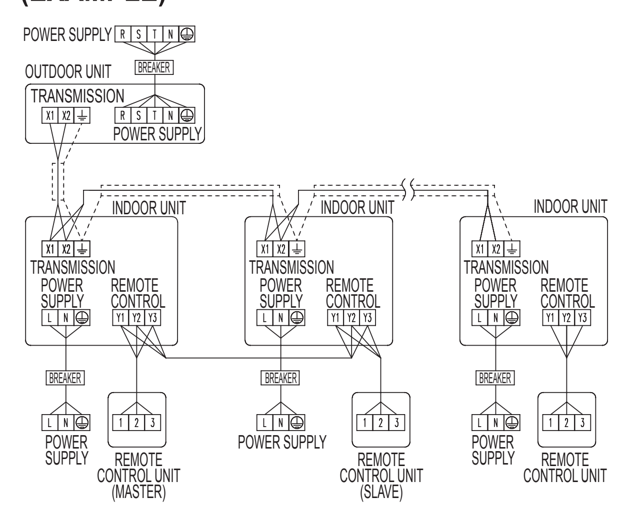
Voltage rating	230 V
Operating range	198 - 264 V

	Recom-mended cable size (mm²)	Cable type	Remark
Power supply cable	2.5	Type245 IEC57 or equivalent	1ø 50 Hz 198 - 264 V 2 Cable + ground
Transmission cable	0.33	LONWORKS compatible cable	22 AWG LEVEL 4 (NEMA) non-polar 2 core, twisted pair solid core diameter 0.65 mm
Remote control cable	0.33	Sheathed PVC cable*	Polar 3 core Twisted pair

*: Use shielded cable in accordance with local rules for remote control cable.

6.2. Wiring method

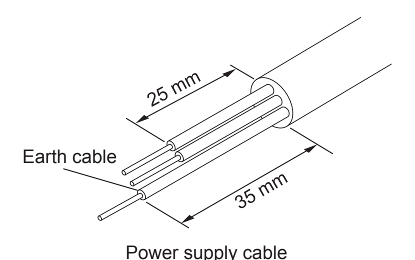
(EXAMPLE)



6.3. Unit wiring

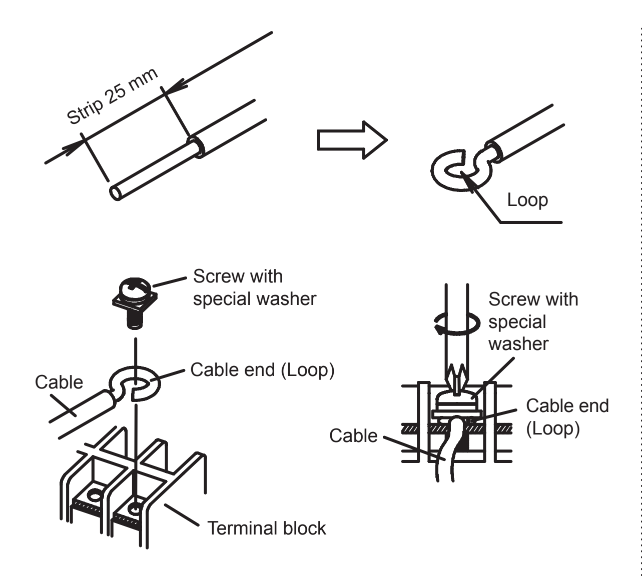
• Before attaching the cable to terminal block.

6.3.1. Power supply cable



A. For solid core wiring

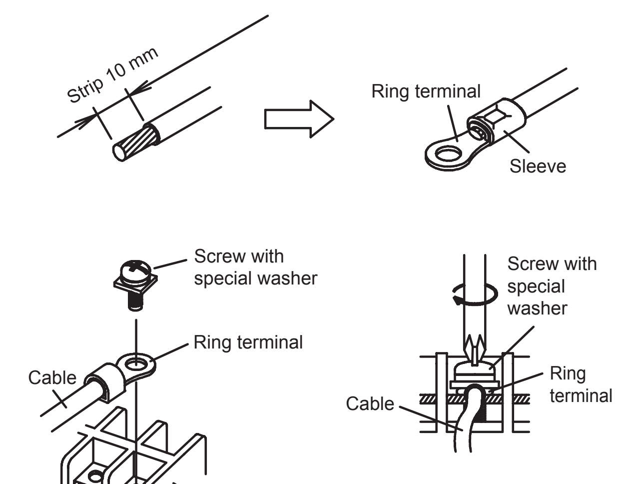
(1) To connect the electrical terminal, follow the below diagram and connect after looping it around the end of the cable.
(2) Use the specified cables, connect them securely, and fasten them so that there is no stress placed on the terminals.
(3) Use an appropriate screwdriver to tighten the terminal screws. Do not use a screwdriver that is too small, otherwise, the screw heads may be damaged and prevent the screws from being properly tightened.
(4) Do not tighten the terminal screws too much, otherwise, the screws may break.
(5) See the table for the terminal screw tightening torques.
(6) Please do not fix two power supply cables with one screw.



> ⚠ **WARNING**
>
> • When using solid core cables, do not use the ring terminal. If you use the solid core cables with the ring terminal, the ring terminal's pressure bonding may malfunction and cause the cables to abnormally heat up.

B. For strand wiring

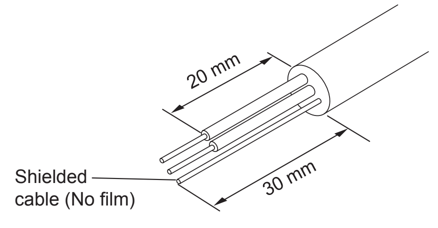
(1) Use ring terminals with insulating sleeves as shown in the figure below to connect to the terminal block.
(2) Securely clamp the ring terminals to the cables using an appropriate tool so that the cables do not come loose.
(3) Use the specified cables, connect them securely, and fasten them so that there is no stress placed on the terminals.
(4) Use an appropriate screwdriver to tighten the terminal screws. Do not use a screwdriver that is too small, otherwise, the screw heads may be damaged and prevent the screws from being properly tightened.
(5) Do not tighten the terminal screws too much, otherwise, the screws may break.
(6) See the table for the terminal screw tightening torques.
(7) Please do not fix two power supply cables with one screw.



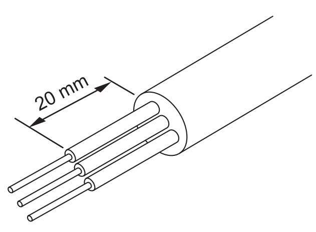
> ⚠ **WARNING**
>
> • Use ring terminals and tighten the terminal screws to the specified torques, otherwise, abnormal overheating may be produced and possibly cause heavy damage inside the unit.

Tightening torque	
M4 screw (Power supply/L, N, GND)	1.2 to 1.8 N·m (12 to 18 kgf·cm)

6.3.2. Transmission and Remote control cable



Transmission cable

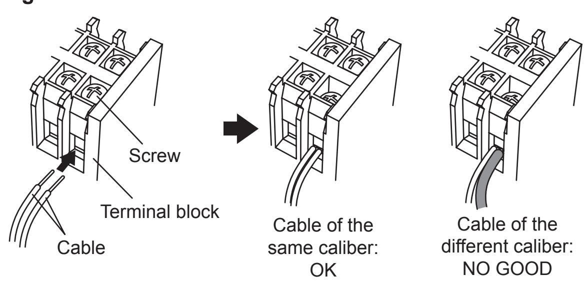


Remote control cable

• Connect remote control and transmission cables as shown in Fig. B.

• When the two cables are attached.

Fig. B



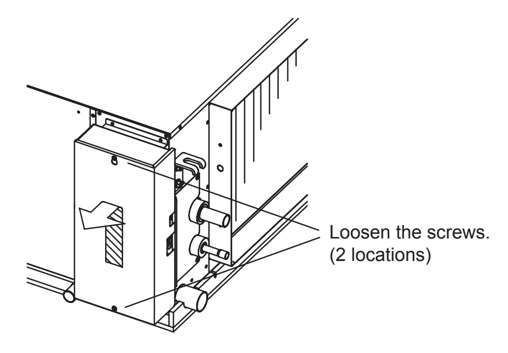
> ⚠ **WARNING**
>
> • Tighten the terminal screws to the specified torques, otherwise, abnormal overheating may be produced and possibly cause heavy damage inside the unit.

Tightening torque	
M3.5 screw (Transmission/X1, X2) (Remote control/Y1, Y2, Y3)	0.8 to 1.0 N·m (8 to 10 kgf·cm)

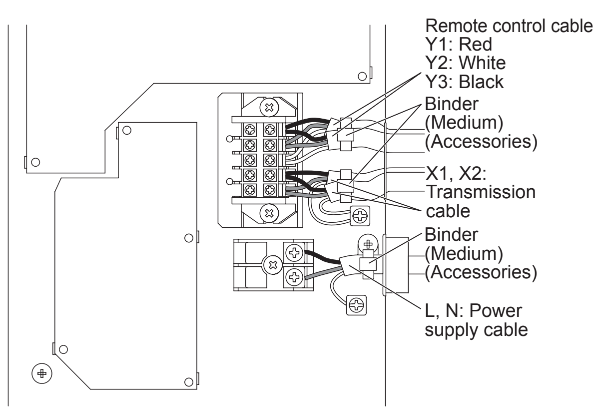
⚠ CAUTION
• To peel the film from the lead cable, use a dedicated tool that will not damage the conductor cable.
• When installing a screw on the terminal block, do not cut the cable by overtightening the screw. On the other hand, an undertightened screw can cause faulty contact, which will lead to a communication failure.

6.4. Connection of wiring

(1) Remove the control box cover and install each connection cable.



(2) After wiring is complete, clamp the remote controller cable, connection cable and power supply cable with cable clamp.



⚠ CAUTION
• When installing a screw on the terminal board, do not cut the cable by overtightening the screw. On the other hand, an undertightened screw can cause faulty contact, which will lead to a communication failure.

(3) Attach the control box cover.

6.5. Air flow changing

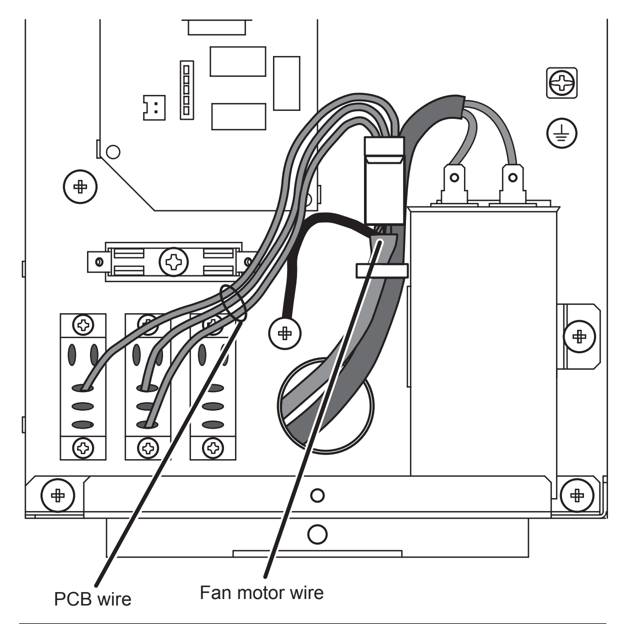
When apply external static pressure less than 150Pa (ARXC72) or 200Pa (ARXC90) on the model, please follow the methods below to connect relay wire.

(1) Disconnect the PCB wire connector from Fan motor wire connector.
(2) Connect the Fan motor wire with Relay wire.
(3) Connect the PCB wire with Relay wire.

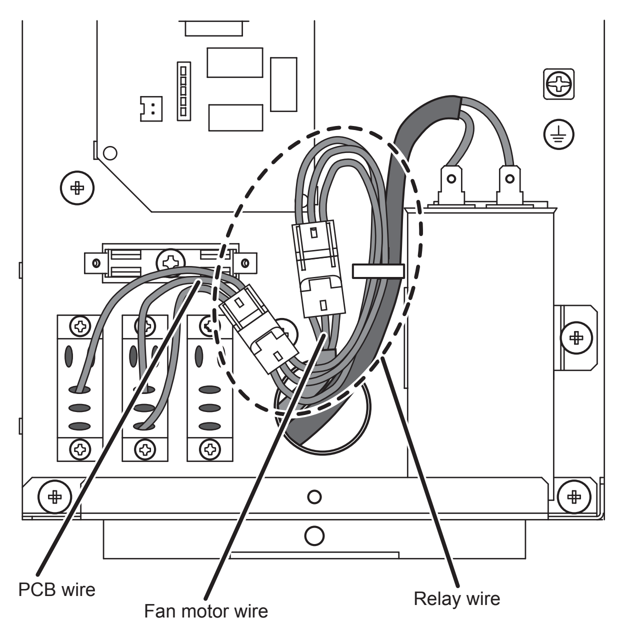
External Static Pressure	Relay wire	Remark
ARXC72 : 50-150Pa ARXC90 : 100-200Pa	① PINK ② PURPLE ③ BLUE	Accessories (Standard static pressure)

• Layout of circuit board

High Static Pressure mode : 150-300Pa (ARXC72) 200-300Pa (ARXC90) (Factory setting)



Standard Static Pressure mode : 50-150Pa (ARXC72) 100-200Pa (ARXC90) (Change setting)



Be sure to connect the wire with connector.
If connection is improper, it will not operate properly.

7. FIELD SETTING

- Refer to the following three items for setting the FIELD SETTING address. The respective settings are included below.

(1) IU AD, REF AD SW settings ... This section

(2) Remote control settings .... Refer to the wired or wireless remote control manual for detailed setting information. (Set IU AD, REF AD SW to 0)

(3) Automatic address settings ... Refer to the indoor unit manual for detailed setting information. (Set IU AD, REF AD SW to 0)

⚠ CAUTION

- Be sure to turn OFF the power before performing the field setting.

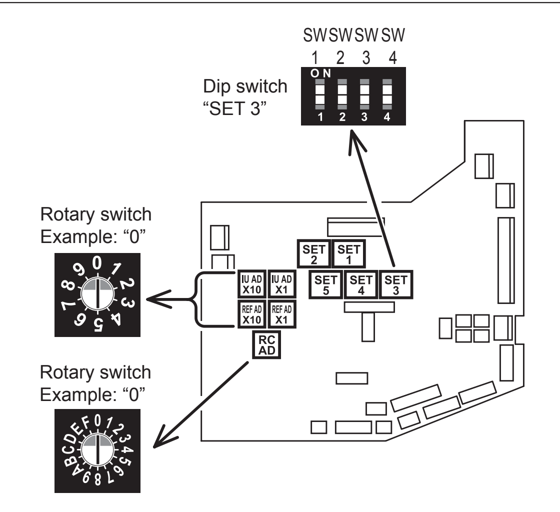
7.1. Setting the address

Manual address setting method

- The indoor unit address and the refrigerant circuit address can also be set up through the wireless remote controller

⚠ CAUTION

- Use an insulated screwdriver to set the dip switches.



Setting	Setting range	Type of switch		
Indoor unit address	0–63	Setting example 2	IU AD × 10	IU AD × 1
Refrigerant circuit address	0–99	Setting example 63	REF AD × 10	REF AD × 1

(1) Indoor unit address
Rotary switch (IU AD × 1)......Factory setting “0”
Rotary switch (IU AD × 10)....Factory setting “0”
When connecting multiple indoor units to one refrigerant system, set the address at IU AD SW as shown in the Table A.

(2) Refrigerant circuit address
Rotary switch (REF AD ×1)..... Factory setting “0”
Rotary switch (REF AD ×10)... Factory setting “0”
In the case of multiple refrigerant systems, set REF AD SW as shown in the Table A for each refrigerant system.
Set to the same refrigerant circuit address as the outdoor unit.

Table A

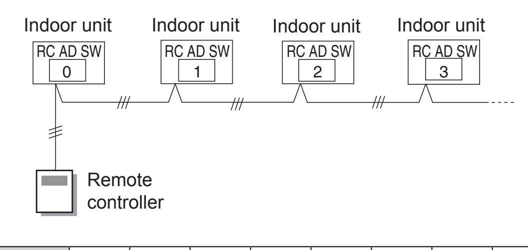
Address	Rotary Switch Setting		Address	Rotary Switch Setting	
Refrigerant circuit	REF AD SW		Indoor unit	IU AD SW	
	× 10	× 1		× 10	× 1
0	0	0	0	0	0
1	0	1	1	0	1
2	0	2	2	0	2
3	0	3	3	0	3
4	0	4	4	0	4
5	0	5	5	0	5
6	0	6	6	0	6
7	0	7	7	0	7
8	0	8	8	0	8
9	0	9	9	0	9
10	1	0	10	1	0
11	1	1	11	1	1
12	1	2	12	1	2
⋮	⋮	⋮	⋮	⋮	⋮
99	9	9	63	6	3

Do not set the indoor unit address (IU AD SW) at 64 to 99. It may result failure.

(3) Remote controller address
Rotary switch (RC AD SW)....Factory setting “0”
When connecting multiple indoor units to one standard wired remote controller, set the address at RC AD SW in sequence from 0.

Setting	Setting range	Type of switch	
Remote controller address	0–15	Setting example 0	RC AD

Example If 4 indoor units are connected.



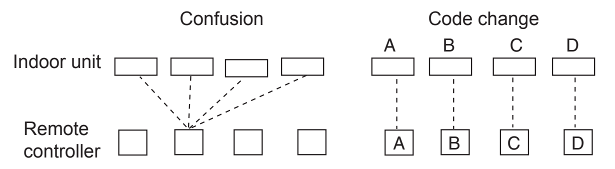
RC AD SW	0	1	2	3	4	5	6	7
Address	0	1	2	3	4	5	6	7

RC AD SW	8	9	A	B	C	D	E	F
Address	8	9	10	11	12	13	14	15

7.2. Custom code setting

Selecting the custom code prevents the indoor unit mix-up. (Fig. B)
(Up to 4 codes can be set.)
Perform the setting for both the indoor unit and the remote controller.

Fig. B



- **Custom code setting for indoor unit**

Set the DIP SW SET 3 SW1, SW2 referring to the Table B.

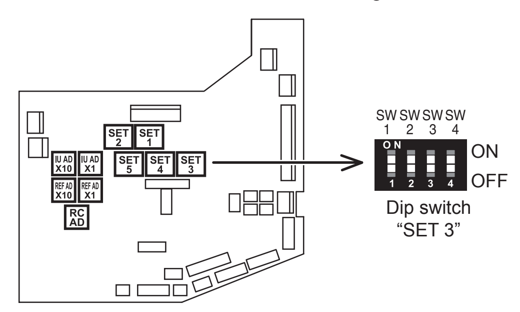


Table B

	Custom code			
	A (Factory setting)	B	C	D
DIP SW SET 3 SW1	OFF	ON	OFF	ON
DIP SW SET 3 SW2	OFF	OFF	ON	ON

7.3. Function setting

- FUNCTION SETTING can be performed with the wired or wireless remote control.
  (The remote control is optional equipment)
- Refer to the wired or wireless remote control manual for detailed setting information. (Set IU AD, REF AD SW to 0)
- Refer to "7.1. Setting the address" for indoor unit address and refrigerant circuit address settings.
- Turn the power of the indoor unit ON before starting the setting.

  * Turning on the power indoor units initializes EEV, so make sure the piping air tight test and vacuuming have been conducted before turning on the power.
  * Also check again to make sure no wiring mistakes were made before turning on the power.

Function details

Function	Function number	Setting number		Default	Details
Filter indicator interval	11	00	Default	○	Adjust the filter cleaning interval notification. If the notification is too early, change to setting 01. If the notification is too late, change to setting 02.
		01	Longer		
		02	Shorter		
Filter indicator action	13	00	Enable	○	Enable or disable the filter indicator. Setting 02 is for use with a central remote control.
		01	Disable		
		02	Display only on central remote control		
Horizontal swing airflow direction	24	00	Default	○	Adjust the horizontal swing airflow direction. (For horizontal swing equipped models)
		01	Left half		
		02	Right half		
Cool air temperature trigger	30	00	Default	○	Adjust the cool air trigger temperature. To lower the trigger temperature, use setting 01. To raise the trigger temperature, use setting 02.
		01	Adjust (1)		
		02	Adjust (2)		
Hot air temperature trigger	31	00	Default	○	Adjust the hot air trigger temperature. To lower the trigger temperature by 6 degrees C, use setting 01. To lower the trigger temperature by 4 degrees C, use setting 02. To raise the trigger temperature, use setting 03.
		01	Adjust (1)		
		02	Adjust (2)		
		03	Adjust (3)		
Auto restart	40	00	Enable		Enable or disable automatic system restart after a power outage.
		01	Disable	○	
External control	46	00	Start/Stop	○	Allow an external controller to start or stop the system, or to perform an emergency shutdown. *If an emergency shutdown is performed from an external controller, all refrigerant systems will be disabled.
		01	Emergency stop		
Error report target	47	00	All	○	Change the target for reporting errors. Errors can either be reported in all locations, or only on the wired remote.
		01	Display only on central remote control		

8. TEST OPERATION

8.1. Test operation using PCB (Outdoor unit)

- Refer to the Installation Manual for the outdoor unit if the PCB for the outdoor unit is to be used for the test operation.

8.2. Test operation using remote controller

- Refer to the Installation Manual for the remote control unit to perform the test operation using the remote control unit.
- When the air conditioner is being test run, the OPERATION and TIMER flash slowly at the same time.

For details, please refer to the Manual of "IR Receiver Unit" or "Wired Remote Controller".

9. CHECK LIST

Pay special attention to the check items below when installing the indoor unit(s). After installation is complete, be sure to check the following check items again.

Check items	If not performed correctly	Check box
Has the indoor unit been installed correctly?	Vibration, noise, indoor unit may drop	
Has there been a check for gas leaks (refrigerant pipes)?	No cooling, No heating	
Has heat insulation work been completed?	Water leakage	
Does water drain easily from the indoor units?	Water leakage	
Is the voltage of the power source the same as that indicated on the label on the indoor unit?	No operation, heat or burn damage	
Are the wires and pipes all connected completely?	No operation, heat or burn damage	
Is the indoor unit grounded?	Short circuit	
Is the connection cable the specified thickness?	No operation, heat or burn damage	
Are the inlets and outlets free of any obstacles?	No cooling, No heating	
After installation is completed, has the proper operation and handling been explained to the user?	———	

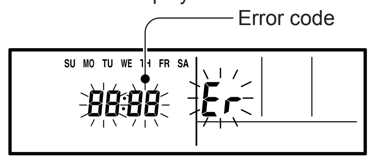
10. ERROR CODES

If you use a wired type remote control, error codes will appear on the remote control display. If you use a wireless remote control, the lamp on the photodetector unit will output error codes by way of blinking patterns. See the lamp blinking patterns and error codes in the table below.

Abnormal display			Wired Remote Controller Error CODE	Abnormal contents
OPERATION indicator lamp (green)	TIMER indicator lamp (orange)	FILTER indicator lamp (red)		
● (1)	● (2)	◇	12	Remote control abnormal communication
● (1)	● (4)	◇	14	Anomalous network communications
● (1)	● (6)	◇	16	Abnormal parallel communication
● (3)	● (1)	◇	31	Abnormal power frequency
● (3)	● (2)	◇	32	Abnormal model information / abnormal EEPROM accession
● (4)	● (1)	◇	41	Abnormal room temperature thermistor
● (4)	● (2)	◇	42	Abnormal indoor heat exchanger temperature thermistor
● (5)	● (1)	◇	51	Abnormal indoor fan motor
● (5)	● (3)	◇	53	Abnormal drainage
● (9)	● (15)	◇	9U	Abnormal outdoor unit

Display mode ● : 0.5s ON / 0.5s OFF
◇ : 0.1s ON / 0.1s OFF
( ) : Number of flashing

Wired Remote Controller Display



For details on marking the ERROR CODES, please refer to the Manual of “IR Receiver Unit” or “Wired Remote Controller”.

VRF 系统
室内机组
风管式

⚠ 注意

R410A

制冷剂

本空调含有并使用制冷剂R410A。

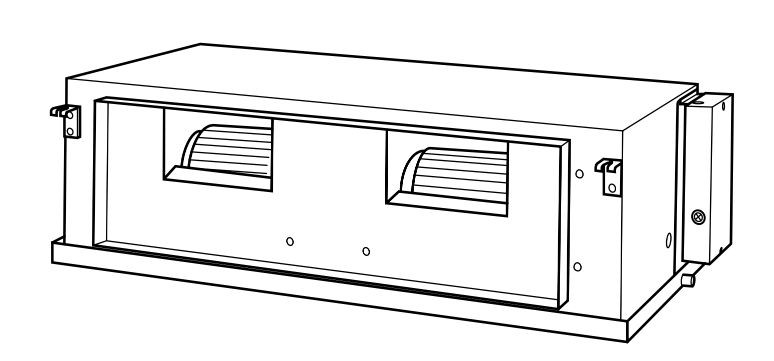
本产品需由专业人员安装或维修。

在安装、保养及（或）维修本产品前，请先阅读联邦、州、地区及地方之法律、规则、法规、及安装手册。

中文

安装说明书

只供授权专业维修人员使用。



目录

PART NO. 9365748077-02

1. 安全注意事项

- 安装之前务必彻底阅读该说明书。
- 该说明书指出的警告和注意事项包含与您的安全密切相关的重要信息。请务必遵循这些信息。
- 将该说明书与操作手册交给用户。请用户将它们收藏好，以便日后使用，例如更换机组位置或对机组进行修理。

⚠ 警告	该标志表示如果步骤执行失当，可能会导致用户死亡或严重伤害。

- 请您的经销商或专业安装人员依照该安装说明书安装机组。机组安装不适当可能造成严重的事故，例如漏水、电击或火灾。如果没有依照安装说明书中的说明来安装室内机组，则制造商不会保用。
- 未完成所有工作之前请勿打开电源。在工作完成之前打开电源可能造成严重的事故，例如电击或火灾。
- 如果制冷剂在执行工作时泄漏，请为该区域通风。如果制冷剂接触火，就会产生有害气体。
- 务必由授权的维修人员按照国家接线标准执行安装工作。

⚠ 注意	该标志表示，如果步骤执行不当，可能会导致用户人身伤害或财产损害。

2. 关于机组

2.1. 使用 R410A 制冷剂时的注意事项

⚠ 警告

- 请勿让除规定的制冷剂之外的其他物质进入制冷循环。如果空气进入制冷循环，则其中的压力将变得异常之高，并且会造成管道破裂。
- 如果制冷剂泄漏，请确保它未超过浓度限制。如果制冷剂泄漏超过了浓度限制，则可能造成缺氧等事故。
- 请勿触摸从制冷剂管接头等部位泄漏的制冷剂。直接触摸制冷剂会导致冻伤。
- 如果运行过程中发生制冷剂泄漏，请立即离开建筑物，并对该区域彻底通风。如果制冷剂接触火，就会产生有害气体。

2.2. R410A 的专用工具

⚠ 警告

- 要安装使用 R410A 制冷剂的机组，请使用专供 R410A 使用而制造的专用工具和管道材料。由于 R410A 制冷剂的压力约是 R22 的 1.6 倍，未使用专用的管道材料或不当的安装可能会导致管道破裂或造成人身伤害。另外，还可能会导致如漏水、电击或火灾等严重事故。

工具名称	变更内容
压力表歧管	压力较高，不能使用传统的压力计测量。为了避免与其它制冷剂错误混合，每个接口的直径均已更改。建议使用具有高压力显示范围为 -0.1 至 5.3 MPa 以及低压力显示范围为 -0.1 至 3.8 MPa 的压力表歧管。
充注软管	为了增加抗压能力，软管材料和尺寸已变更。 (R410A 的充注接口螺纹直径为 1/2 UNF 每英寸 20 个螺纹。)
真空泵	可以通过安装真空泵适配器使用传统的真空泵。 确保真空泵油不会回流到系统中。 使用真空吸力能够达到 –100.7 kPa (5 Torr, –755 mmHg) 的真空泵。
气体泄漏检测器	HFC 制冷剂 R410A 的专用气体泄漏检测器。

2.3. 附件

⚠ 警告

- 安装时，请务必使用制造商供应的部件或其他规定部件。使用非规定部件可能造成严重的事故，例如机组掉落、漏水、电击或火灾。

- 本机配有以下安装部件。 请按照需要使用。
- 请妥善保管安装说明书，并且不要在安装工作完成前丢弃任何其它附件。

说明	数量	应用
使用说明书	1	
安装说明书	1	（本书）
扎线带（大）	4	用于固定连管 （大和小）
扎线带 (中等)	3	用于绑定电源和信号线以及遥控器线

说明	数量	应用
接管绝热材料（小）	1	用于室内机管道接头（小管）
接管绝热材料（大）	1	用于室内机管道接头（大管）
继电器电线	1	用于切换静压
专用螺母 A（大法兰）	4	用于将室内机组悬挂在天花板上
专用螺母 B（小法兰）	4	
垫圈	8	
排水软管（大）	1	用于安装排水软管（用于主排水口）
排水软管（小）	1	用于安装排水软管（用于安全排水口）
软管卡子（大）	1	用于安装排水软管（大）
软管卡子（小）	1	用于安装排水软管（小）
排水管绝热材料	2	用于安装排水软管

3. 安装工作

对于分体式空调，安装地点尤为重要，因为首次安装后，移动位置非常困难。

3.1. 选择安装位置

请按照以下要求与用户一起决定安装位置。

⚠警告

- 选择能有效支撑室内机重量的安装位置。将机组安装牢固，以免倾倒或坠落。

⚠注意

请勿将机组安装在下列区域：
- 盐含量高的区域，例如海边。这会损坏金属部件，使部件掉落或使机组漏水。
- 充满矿物油或包含大量溅油或蒸气的区域，例如厨房。这会损坏塑料部件，使部件掉落或使机组漏水。
- 会产生对设备有负面影响的物质（例如硫磺气体、氯气、酸或碱）的区域。这会腐蚀铜管和铜焊接合，从而造成制冷剂泄漏。
- 可能造成易燃气体泄漏、含有悬浮碳纤维或易燃尘埃，或者如涂料稀释剂或汽油等挥发性易燃物的区域。如果气体泄漏并沉积在机组周围，可能会造成火灾。
- 动物可能会在机组上排尿或者可能会产生氨的区域。

- 请勿将机组用于特殊用途，例如存放食物、饲养动物、栽培植物或保存精密装置或艺术品。
这可能降低保存或存放对象的质量。

- 请勿安装在可能泄漏燃烧气体的地方。

- 请勿将机组安装在靠近热源、蒸汽或易燃气体的地方。

- 将机组安装在排水不会造成任何问题的地方。

- 请在距离电视机和收音机 1 m 以外的地方进行室内机和室外机、电力接线、信号接线及遥控接线的安装，以免发生图像失真和声音失真。（然而，即使将上述机组和接线安装在距电视机和收音机 1 m 以外的地方，根据电波的状况的不同，声音失真也可能无法避免。）

- 如 10 岁以下的儿童有可能接触到时，请采取适当的预防措施，使他们无法接触机组。

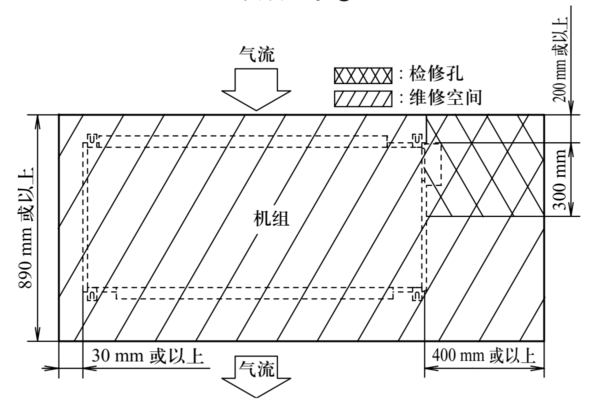
- 请采取预防措施防止机组坠落。

(1) 将室内机安装在具有足够强度的地方，以便能承受室内机的重量。
(2) 请勿堵塞进气口和出气口。空气应能吹向整个房间。
(3) 请保留可以维修空调的空间。
(4) 将机组安装在容易连接室内机的地方。
(5) 请在方便安装连接管的地方安装机组。
(6) 请在方便安装排水管的地方安装机组。
(7) 将机组安装在不会将噪音和振动放大的地方。
(8) 应考虑之后的维修等情况，并留出空间。将机组安装在可以拆卸过滤网的地方。
(9) 请勿在易受阳光直射处安装机组。

3.2. 安装尺寸

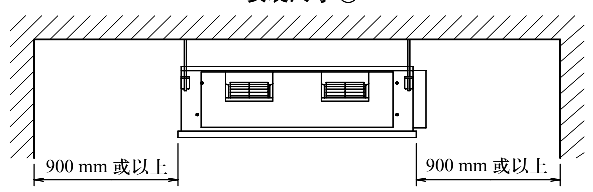
提供用于检查的检修孔，如下图所示。
切勿在维修空间布置线路或照明设施，否则会妨碍维修。

安装尺寸 ①



如果不能提供图“安装尺寸 ①”所示的维修空间，则应按下图所示在机组的左侧或右侧提供 900 mm 的维修空间。切勿在此空间布置线路或照明设施。

安装尺寸 ②



3.3. 安装机组

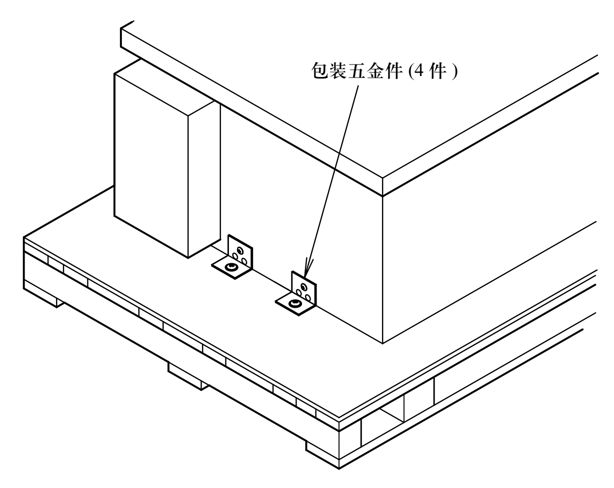
⚠ 警告

- 将空调安装在能够承受至少主机重量 5 倍并且不会将噪音或振动放大的地方。如果安装位置不够坚固，室内机可能会坠落，引起人身伤害。

⚠ 注意

- 请在安装机组前确认进气和出气方向。
  机组从蒸发器一侧进气，从风扇一侧出气。

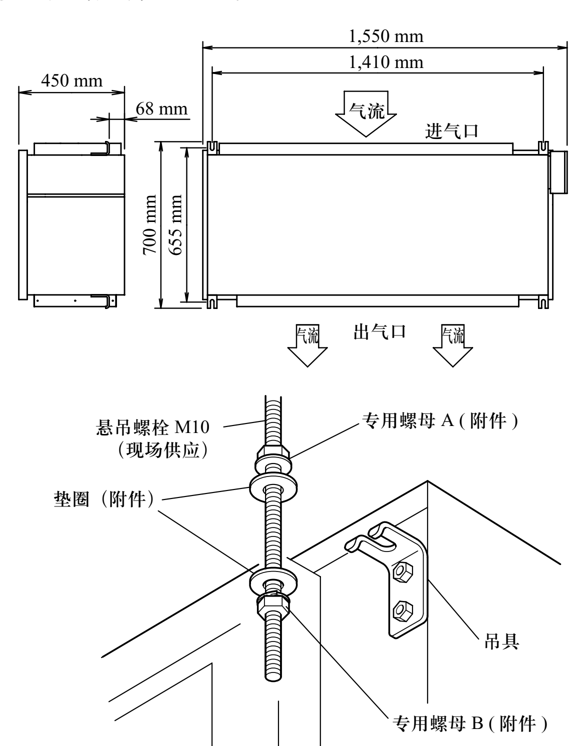
3.3.1. 运输方法



机组到达安装场地前，切勿拆掉包装材料。
拆下包装五金件并将其弃置。

3.3.2. 安装吊具

参照下图将室内机悬挂起。

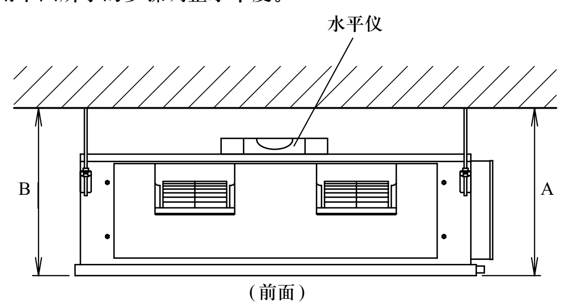


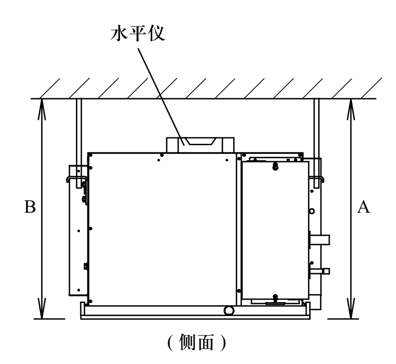
⚠ 注意

- 用专用螺母 A 和 B 牢固地拧紧。

3.3.3. 调平

用下图所示的步骤调整水平度。

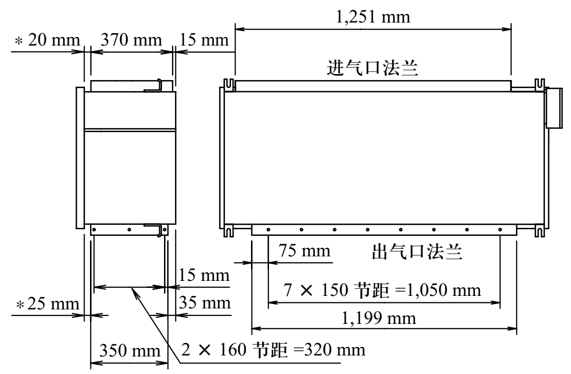




机组有排水口的一侧 Ⓐ 应稍低于机组的另一侧 Ⓑ。Ⓐ 与 Ⓑ 之间允许有 0 至 20 mm 的倾斜度。

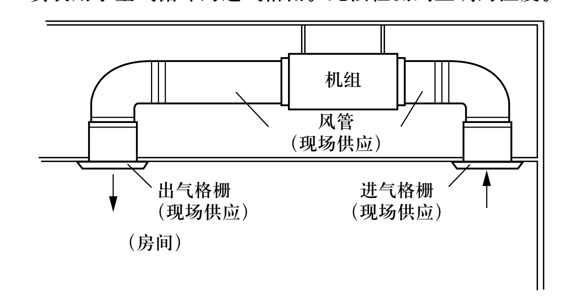
3.3.4. 安装风管

按照下图所示的步骤安装风管。



＊法兰与排水盘之间的距离。

⚠ 注意
• 为了防止别人触碰机组内部的部件，请务必在进气口和出气口安装格栅。格栅必须设计为无法用工具拆卸。
• 将外部静压设在 100 至 300 Pa 之间。
• 如果安装了进气管，请小心不要损坏温度传感器（温度传感器安装在进气口法兰上）。
• 安装用于空气循环的进气格栅。无法检测到正确的温度。



4. 管道安装

⚠ 注意
• 要小心注意的是，杂质（油、水等）不会像制冷剂 R410A 型号那样进入管道。另外，存放管道时，通过夹住、捆绑等牢固密封管口。
• 焊接管道时，务必向里面冲入干燥的氮气。

4.1. 选择管材

⚠ 注意
• 不要使用原有的管道。
• 使用的管道应内外表面清洁，不含在使用过程中可能引起故障的污染物，例如硫、氧化物、灰尘、切屑、油或水。
• 必须使用无缝铜管。 材料：经过磷脱氧处理的无缝铜管 残油量最好小于 40 mg/10 m。
• 使用的铜管不能带有压扁、变形或变色的部分（尤其是在内部表面）。否则，膨胀阀或毛细管可能会被污染物堵塞。
• 管道选择不当会降低性能。由于使用 R410A 的空调会比使用传统的制冷剂时承受更高的压力，因此需要选择适当的材料。

• 使用 R410A 的铜管厚度如表所示。
• 绝对不要使用厚度不足于表中所示的铜管，即使市场上有售。

退火铜管的厚度（R410A）

管道外径 [mm (in.)]	厚度 [mm]
6.35 (1/4)	0.80
9.52 (3/8)	0.80
12.70 (1/2)	0.80
15.88 (5/8)	1.00
19.05 (3/4)	1.20

4.2. 管道要求

⚠注意
• 有关连接管道长度或不同标高的规格，请参见室外机的安装说明书。

• 使用带防水热绝缘材料的管道。

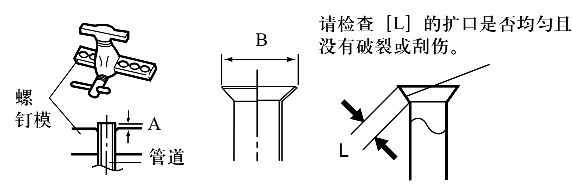
⚠注意
• 请在气体和液体管道周围安装绝热材料。否则可能会导致漏水。 请使用抗热能力超过 120℃的绝热材料。(仅限逆循环型) 此外，如果安装制冷剂管道的地方的湿度可能会超过 70%，请在制冷剂管道周围安装绝热材料。 如果预计的湿度为 70-80%，请使用 15 mm 或更厚的绝热材料；如果预计的湿度超过 80%，请使用 20 mm 或更厚的绝热材料。如果使用的绝热材料未达到指定的厚度，可能会在材料表面形成冷凝。 此外，请使用热传导率为 0.045 W/(m•K) 或以下（20°C 时）的绝热材料。

4.3. 扩口接头（管接头）

4.3.1. 扩口

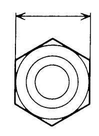
• 请使用专用的切管机和 R410A 专用的扩口工具。

(1) 使用切管机将连接管道截成所需的长度。
(2) 向下按住水管以避免切屑进入管道并去除毛刺。
(3) 将扩口螺母（必须使用分别连接到室内机和室外机的扩口螺母）插入管道，并使用扩口工具执行扩口工序。请使用专用的 R410A 扩口工具或传统的扩口工具。如果使用其它扩口螺母，会导致制冷剂泄漏。
(4) 请夹住或用胶带保护管道，防止灰尘、污物或水进入管道。



管道外径 [mm (in.)]	尺寸 A [mm] R410A的扩口工具，离合式	尺寸 $B^{0}_{-0.4}$ [mm]
6.35 (1/4)	0至0.5	9.1
9.52 (3/8)		13.2
12.70 (1/2)		16.6
15.88 (5/8)		19.7
19.05 (3/4)		24.0

当使用传统的扩口工具对 R410A 管道进行扩口时，尺寸 A 应比表中（针对使用 R410A 扩口工具进行扩口）所示的尺寸大约 0.5 mm 以获得指定的扩口。使用厚度测量仪测量尺寸 A。



管道外径 [mm (in.)]	扩口螺母的扳手开口宽度 [mm]
6.35 (1/4)	17
9.52 (3/8)	22
12.70 (1/2)	26
15.88 (5/8)	29
19.05 (3/4)	36

4.3.2. 弯管加工

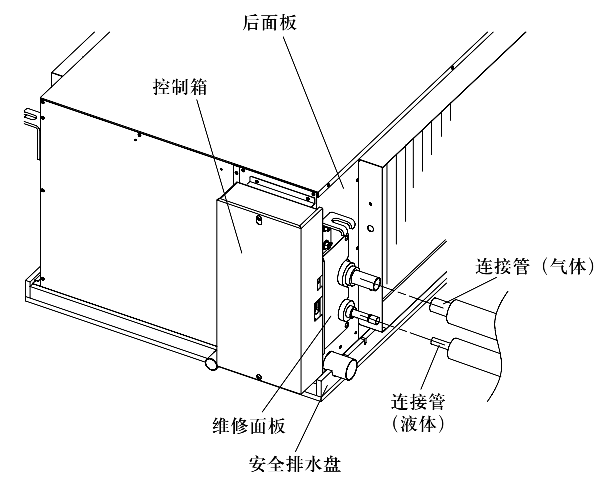
• 用手或弯管器使管道成形。注意请勿将它们压扁。
• 弯曲管道时角度不应超过90°。
• 如果反复弯曲或拉伸管道，材料将变硬，以至很难再次弯曲或拉伸。弯曲或拉伸管道的次数不应超过三次。

⚠注意
• 为了防止管道破裂，应避免过度的弯曲。
• 如果管道在同一位置反复弯曲，它会破裂。

4.3.3. 管道连接

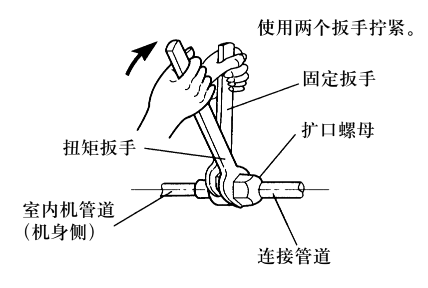
• 气体管和液体管的管接头必须进行铜焊。
• 必须在配线或安装排水管前铜焊这些管接头。

	管子外径
液体管	12.70 mm
气体管	25.40 mm



用手正确地拧紧扩口螺母时，用单独的扳手按住机身侧沟槽连接件，然后用扭矩扳手拧紧。

⚠注意
• 握住扭矩扳手的手柄，使其与管道成 90 度，以便顺利地拧紧扩口螺母。
• 按照指定的拧紧方法，用扭矩扳手拧紧扩口螺母。 否则长时间以后，扩口螺母会破裂，导致制冷剂泄漏，如果制冷剂与火焰接触，还会产生有害气体。



⚠ 注意

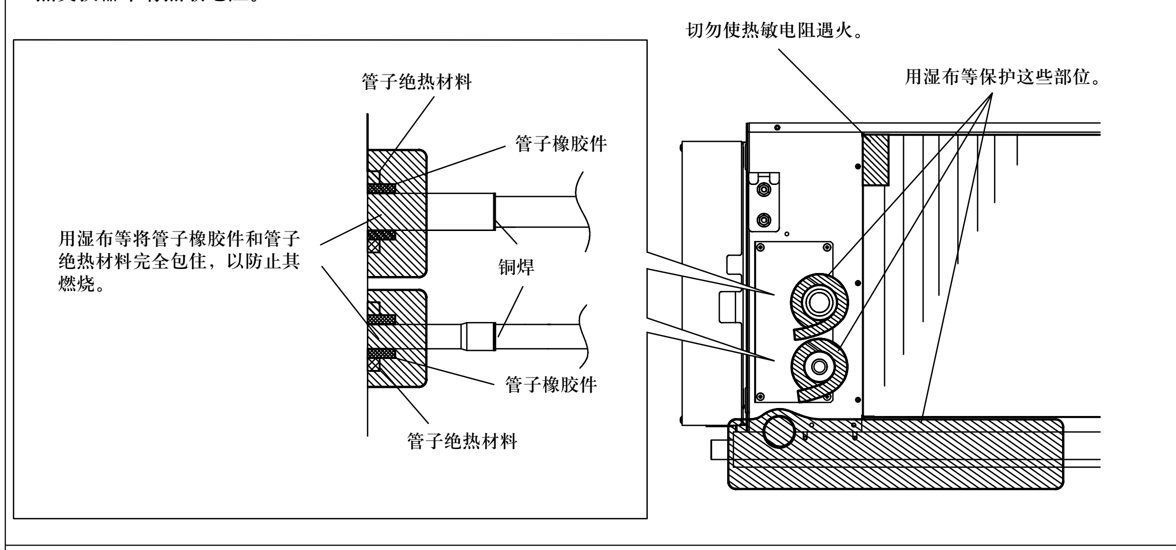
- 务必要将管道与室内机的接口正确连接。如果没有对齐，扩口螺母将无法顺利紧固。如果强行旋转扩口螺母，将损坏螺纹。
- 只有在对连接管道进行连接之前才能从室内机管道上拆除扩口螺母。
- 请勿在扩口部件上使用矿物油。防止矿物油进入系统，因为这样会降低机组的寿命。

扩口螺母[mm (in.)]	拧紧扭矩[N·m (kgf·cm)]
直径 6.35 (1/4)	16至18 (160至180)
直径 9.52 (3/8)	32至42 (320至420)
直径 12.70 (1/2)	49至61 (490至610)
直径 15.88 (5/8)	63至75 (630至750)
直径 19.05 (3/4)	90至110 (900至1,100)

⚠警告

- 必须按下图所示用湿布等保护管子橡胶件、管子绝热材料和安全排水盘的绝热材料。因为这些零件非常易燃，如果保护不当，会引起火灾。

- 热交换器中有热敏电阻。

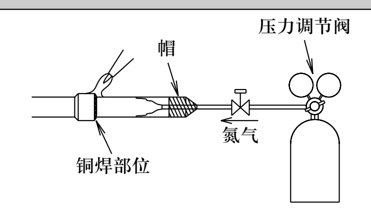


- 切勿使机组 (控制箱、后面板、维修面板等) 和进气格栅遇火。如果这些零件遇火，会对其外观和功能有不利影响，也可能引起火灾。

⚠注意

- 如果空气或其它类型的制冷剂进入制冷循环，制冷循环的内压会异常升高，阻碍机组达到最大能力。

- 进行管子铜焊时要使用氮气。
  氮气压力 ：0.02 MPa (= 手背能感到的压力)



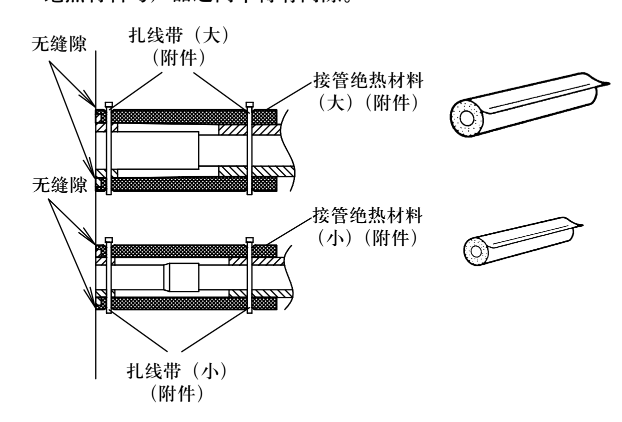
- 如果在管子铜焊时没有使用氮气，会产生氧化膜。这样会降低机组部件 (压缩机或阀门) 的性能或损坏机组部件。

- 在管子铜焊时切勿使用焊剂。如果焊剂是含氯焊剂，会引起管子腐蚀。此外，如果焊剂中含有氟化物，会对制冷剂管路系统产生不利影响 (例如使制冷油变质)。

- 使用铜焊材料时，请使用不需要焊剂的磷铜。

4.4. 安装绝热材料

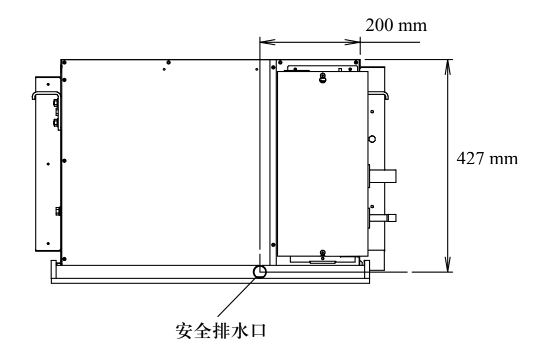
- 请在完成制冷剂泄漏检查后安装管接头绝热材料（有关详细信息，请参见室外机的安装说明书）。
- 绝热材料与产品之间不得有间隙。

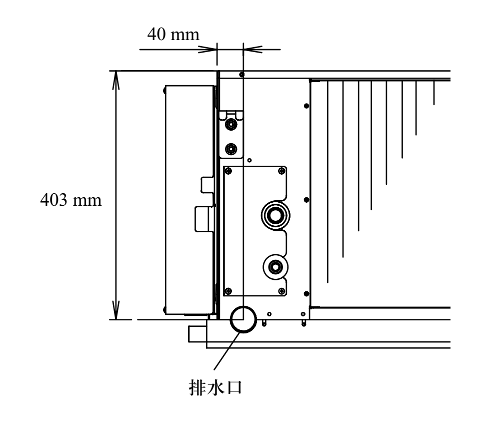


5. 安装排水软管

- 使用普通的硬聚氯乙烯管（VP25）并使用不干胶（聚氯乙烯）连接，确保其没有泄漏。
- 排水管的安装位置应有至少 1/100 的向下坡度。
- 为防止管子冻结，请根据需要使用绝热材料。

排水管的位置





	外径
排水管 • 用于主排水口 • 用于安全排水口	32 mm (VP25)

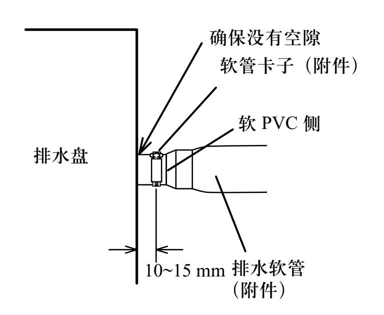
- 本产品有两处排水口。请按照图中所示步骤将排水软管和排水管连接到各排水口。

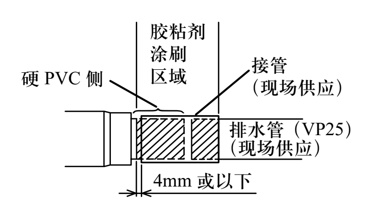
将排水软管安装到主排水口和安全排水口

操作步骤

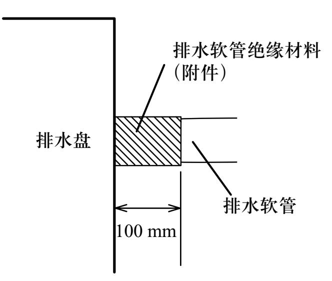
(1) 将附带的排水软管安装在机体的主排水口和安全排水口上。在图形显示区域内从软管的顶部安装软管卡子。请用软管夹箍牢牢地固定。
(2) 用乙稀胶粘剂粘合在现场准备的排水管（PVC 管 VP25）或管道插槽。（在规线和密封件之前均匀地涂有色胶粘剂）
(3) 检查排水情况。
(4) 安装绝热材料。
(5) 用附带的绝热材料对机体的排水口和卡子部分进行绝热。

	附件		
用于主排水口	排水口（大）	软管夹子（大）	排水软管绝热材料
用于安全排水口	排水口（小）	软管夹子（小）	排水软管绝热材料



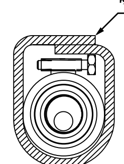


将排水软管绝缘材料缠裹在排水软管连接处的四周。

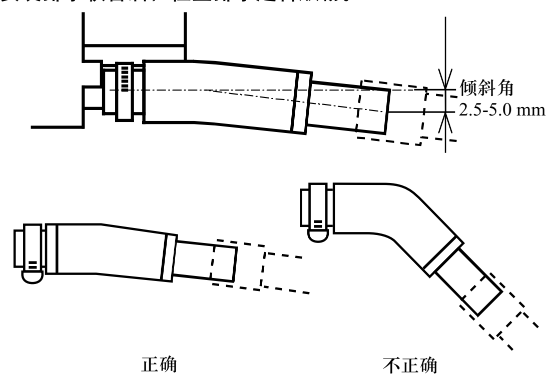


软管剖开视图

将附带的绝热材料缠在软管卡子上。
确保调整部分位于顶部。



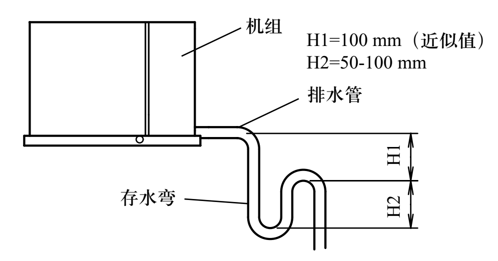
安装排水软管后，检查排水是否顺畅。



安装排水软管

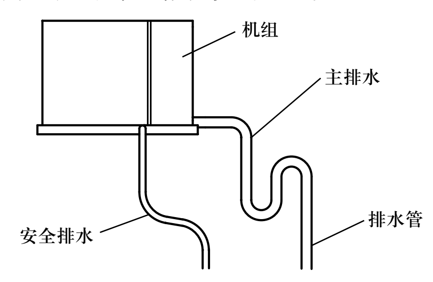
① 主排水口

在主排水口上靠近室内机处形成一个存水弯。

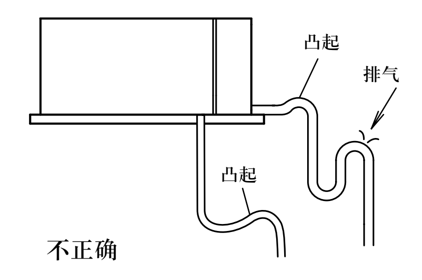


② 安全排水口

安全排水口不需要有存水弯。如果将安全排水口连接到主排水口，则应在主存水弯以下连接。



- 安装排水管时不得有立管。
- 请勿执行排气操作。



⚠ 注意
• 必须对排水管进行正确绝热。
• 确保可以正常排水。

6. 电气接线

⚠ 警告
• 必须由持有证书的人员根据国家或地方法规并按照本说明书执行电气作业。务必使用机组专用的电路。电源电路供电不足或不当的电气作业可能会导致如电击或火灾的严重事故。
• 开始工作前，检查室内机和室外机是否没有通电。
• 使用附带的连接线和电源线，或者制造商指定的线缆。连接不当、绝缘不充分或者超出了允许的电流限制可能会导致电击或火灾。
• 对于接线，使用指定类型的电线，将其牢固连接，并确保电线的外力没有施加到接线端子上。电线连接或紧固不当可能会导致如端子过热、电击或火灾的严重事故。
• 请勿改装电源线、使用延长线或者使用接线中的任何支线。连接不当、绝缘不充分或者超出了允许的电流限制可能会导致电击或火灾。
• 将接线板号码与室外机上的连接线颜色相匹配。错误的接线可能会导致电气部件烧毁。
• 将连接线牢靠地连接到端子板。此外，使用接线座紧固电线。如果接线内或端部连接不当，可能会导致故障、电击或火灾。
• 必须用线夹固定连接线的绝缘层。（如果绝缘层未被夹住，可能会发生漏电。）
• 在机组上牢固地安装电气盒盖。电气盒盖安装不当可能会因暴露于灰尘或水而导致如电击或火灾的严重事故。
• 在用于接线的墙壁开孔中安装套管。否则，可能会导致短路。
• 安装接地漏电断路器。此外，安装接地漏电断路器，以便同时切断整个 AC 主电源。否则，可能会导致电击或火灾。
• 安装接地漏电断路器。 如果未安装接地漏电断路器，可能会导致电击或火灾。
• 必须连接地线。 不当的接地工作可能会导致电击。
• 安装遥控器电线时，要确保不会用手直接触摸到。
• 按照标准进行接线工作，以便空调器可以安全无故障地运行。
• 将连接电缆牢固地连接在接线板上。不正确的安装可能会导致火灾。

⚠ 注意
• 将机组接地。 请勿将地线连接到气体管、水管、避雷针或电话地线。 不适当的接地可能造成电击。
• 请勿将电源线连接到信号线或遥控器接线端，因为这会损坏该产品。
• 绝不要将电源线和信号线束在一起。将这些线束在一起会导致错误运行。

- 操作 PCB 时，机身上的静电可能造成控制 PCB 发生故障。请遵循下列注意事项：
  - 对室内和室外机组以及外围设备使用接地线。
  - 切断电源（断路器）。
  - 请触摸室内和室外机组金属部分 10 秒以上，以释放机身静电。
  - 请勿触碰接线 PCB 上的部件端子和布线模式。

6.1. 电气要求

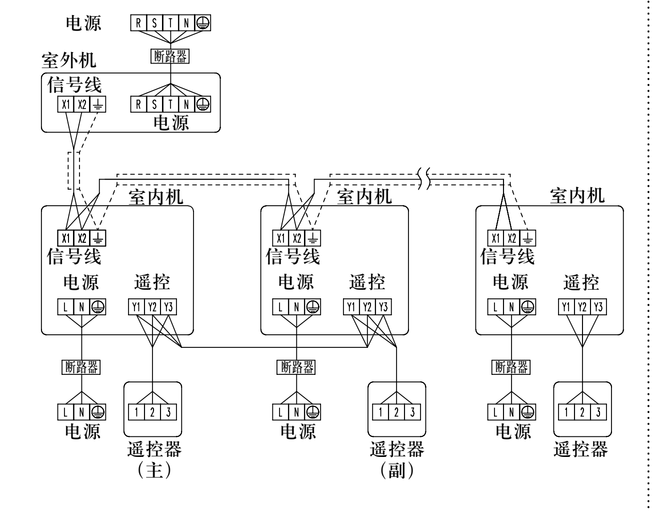
额定电压	230 V
操作范围	198 - 264 V

	电缆尺寸推荐值 (mm^2)	电线类型	备注
电源线	2.5	245 IEC57 或相当品	1ø 50 Hz 198 - 264 V 2 电线 + 地线
信号线	0.33	LONWORKS 兼容线	22 AWG LEVEL 4 (NEMA) 非极性双芯双绞实芯线，直径 0.65 mm
遥控器线	0.33	聚氯乙烯外皮电缆 *	极性 3 芯双绞线

*: 根据当地规则，对遥控器使用屏蔽电缆。

6.2. 接线方法

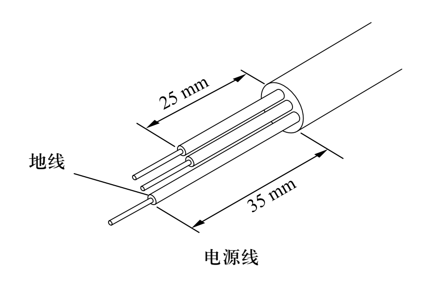
(示例)



6.3. 机组连线

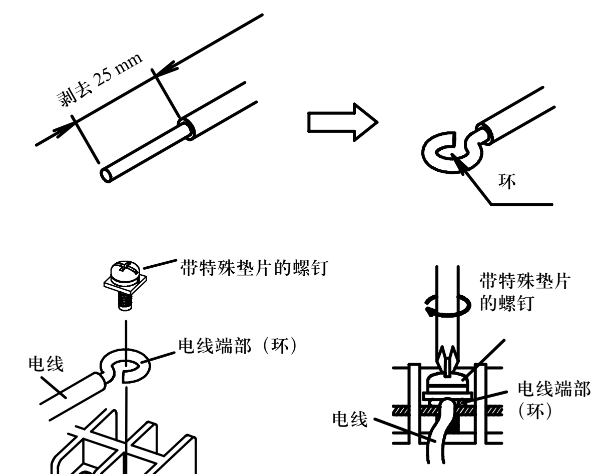
- 将电线连接到接线板之前。

6.3.1. 电源线



A. 对于实芯接线

(1) 要连接电端子，请将电线在端部结环后根据下图进行连接。
(2) 用指定的电线连接牢固，然后拧紧，保持端子上没有张力。
(3) 使用适当的螺丝刀拧紧端子螺钉。不要使用过小的螺丝刀，否则，螺钉头可能会被损坏并且无法将螺钉正确拧紧。
(4) 不要过分拧紧端子螺钉，否则螺钉可能会断裂。
(5) 请参见表中的端子螺钉拧紧扭矩。
(6) 请不要用一颗螺丝固定两根电源线。

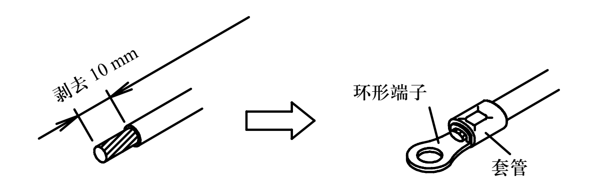


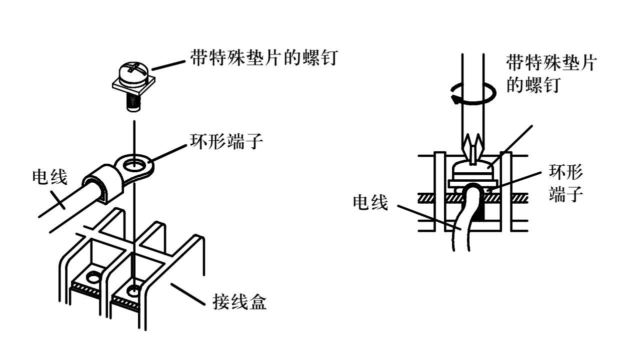
⚠ 警告

- 使用实芯电线时，请勿使用环形端子。如果使用带有环形端子的实芯电线，环形端子的气压粘结可能会发生故障并导致电线异常发热。

B. 对于绞合线

(1) 如下图所示，用带绝缘套管的环形端子连接到接线盒。
(2) 用适当的工具将环形端子压紧到电线，不要让电线松脱。
(3) 用指定的电线连接牢固，然后拧紧，保持端子上没有张力。
(4) 使用适当的螺丝刀拧紧端子螺钉。不要使用过小的螺丝刀，否则，螺钉头可能会被损坏并且无法将螺钉正确拧紧。
(5) 不要过分拧紧端子螺钉，否则螺钉可能会断裂。
(6) 请参见表中的端子螺钉拧紧扭矩。
(7) 请不要用一颗螺丝固定两根电源线。

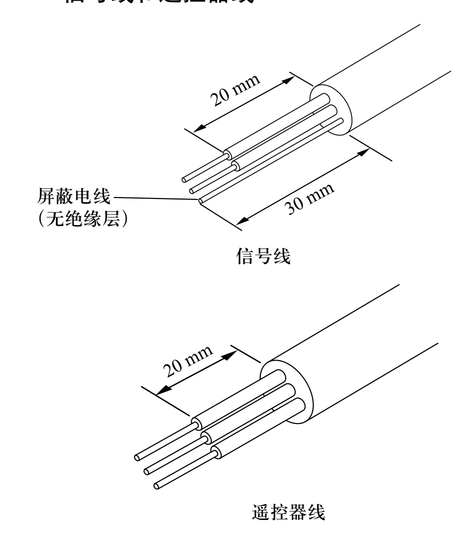




> ⚠ 警告
>
> • 使用环形端子并将端子螺钉拧紧到指定的扭矩，否则可能会造成异常过热并可能造成机组内部严重损坏。

拧紧扭矩	
M4 螺钉 （电源 /L, N, GND）	1.2 至 1.8 N · m (12 至 18 kgf · cm)

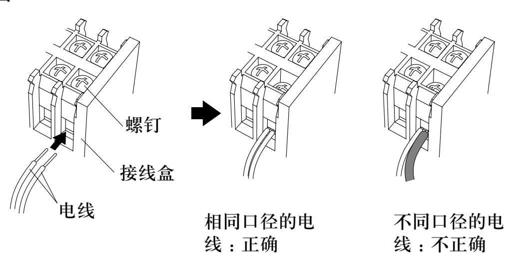
6.3.2. 信号线和遥控器线



• 如图 B 所示连接遥控和信号线。

• 连接两根电线时。

图 B



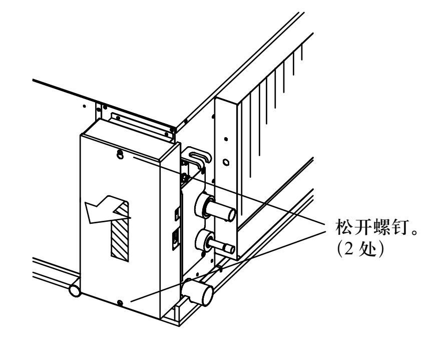
> ⚠ 警告
>
> • 将端子螺钉拧紧到指定的扭矩，否则可能会造成异常过热并可能造成机组内部严重损坏。

拧紧扭矩	
M3.5 螺钉 （传输 /X1，X2） （遥控器 /Y1，Y2, Y3）	0.8 至 1.0 N · m (8 至 10 kgf · cm)

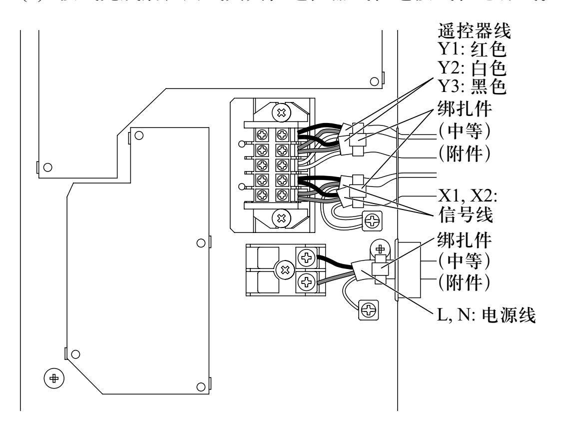
> ⚠ 注意
>
> • 要剥去引线上的绝缘层，请使用不会损坏导线的专用工具。
>
> • 在接线盒上安装螺钉时，请勿过度拧紧螺钉而折断电线。同时，过度拧紧的螺钉可能造成错误接触，从而导致通信故障。

6.4. 线路的连接

(1) 卸下控制箱盖并安装每条连接线。



(2) 接线完成后，用线夹夹住遥控器线、连接线和电源线。



> ⚠ 注意
>
> • 将螺丝安装在接线板上时，不要过分拧紧螺丝而将电线剪断。另一方面，未充分拧紧的螺丝可能会造成错误的接触，从而导致通信故障。

(3) 固定控制箱盖。

6.5. 气流更改

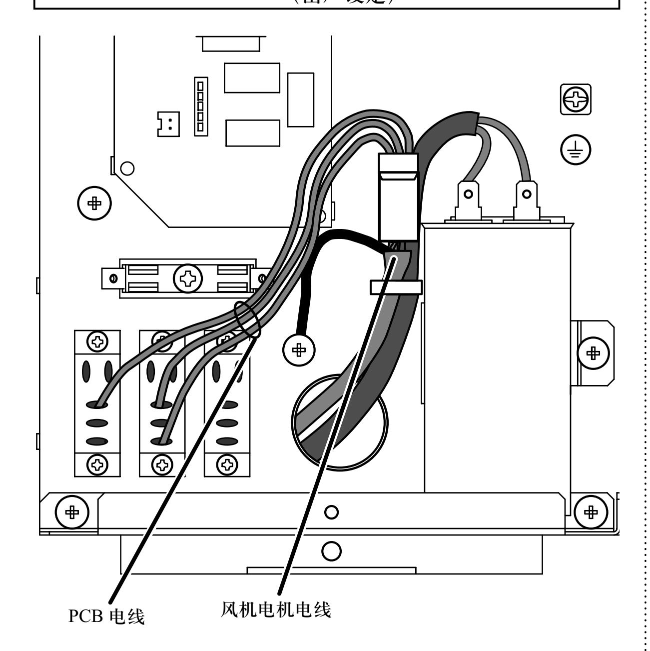
在空调上应用小于 150Pa (ARXC72) 或 200Pa (ARXC90) 的外部静压时，请按照如下方法连接继电器电线。

(1) 从风机电机电线接头断开 PCB 电线接头。
(2) 连接继电器电线和风机电机电线。
(3) 连接继电器电线和 PCB 电线。

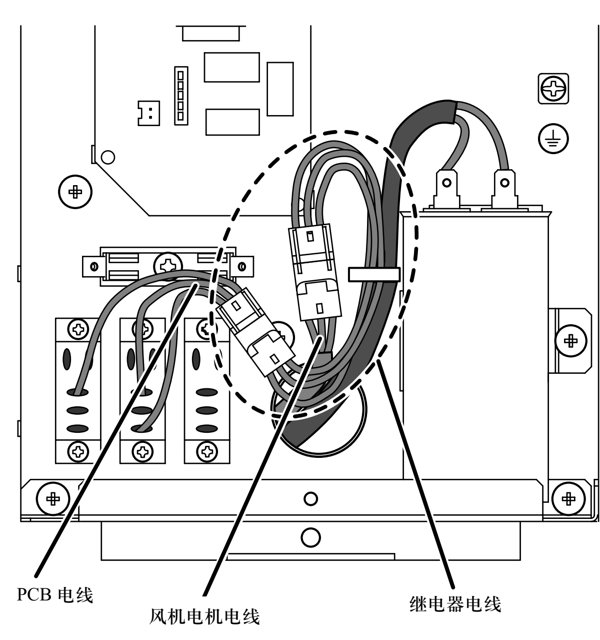
外部静压	继电器电线	备注
ARXC72 : 50-150Pa ARXC90 : 100-200Pa	① 粉红色 ② 紫色 ③ 蓝色	附件（标准静压）

• 电路板的布局

高静压模式 : 150-300Pa (ARXC72)
200-300Pa (ARXC90)
（出厂设定）



标准静压模式 : 50-150Pa (ARXC72)
100-200Pa (ARXC90)
（更改设定）



请务必连接电线和接头。
如果连接不当，则无法正常操作。

7. 现场设置

• 要设置现场设置地址，请参考下列 3 个项目。以下包括了相应的设置。

(1) IU AD，REF AD SW 设置........本部分内容
(2) 遥控器设置 ....有关详细的设置信息，请参阅有线或无线遥控器的说明书。（将 IU AD, REF AD SW 设为 0）
(3) 自动地址设置 ....有关详细的设置信息，请参阅室内机的说明书。（将 IU AD, REF AD SW 设为 0）

⚠ 注意

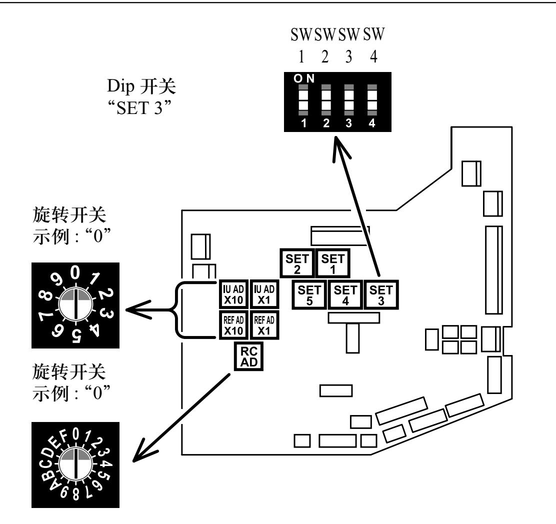
• 在执行现场设置之前，请确保切断电源。

7.1. 设置地址

手动地址设置方法

- 则也可以通过无线遥控器来设置室内机地址和制冷剂地址。

⚠ 注意
• 请使用绝缘螺丝刀来设置 DIP 开关。



设置	设置范围	开关类型	
室内机地址	0–63	设置示例 2	IU AD × 10 / IU AD × 1
制冷剂回路地址	0–99	设置示例 63	REF AD × 10 / REF AD × 1

(1) 室内机地址
旋转开关 (IU AD × 1).............. 出厂设置“0”
旋转开关 (IU AD × 10)............ 出厂设置“0”
将多台室内机连接到一个制冷剂系统时，请参见表 A 中 IU AD SW 处的地址。

(2) 制冷剂回路地址
旋转开关 (REF AD × 1).............. 出厂设置“0”
旋转开关 (REF AD × 10)............ 出厂设置“0”
在有多个制冷剂系统的情况下，请按表 A 所示为每个制冷剂系统设置 REF AD SW。
设置为与室外机相同的制冷剂回路地址。

表 A

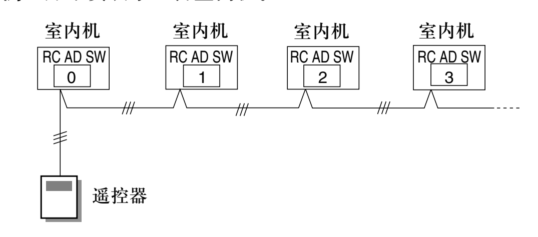
地址	旋转开关设置		地址	旋转开关设置	
	REF AD SW			IU AD SW	
制冷剂回路	× 10	× 1	室内机	× 10	× 1
0	0	0	0	0	0
1	0	1	1	0	1
2	0	2	2	0	2
3	0	3	3	0	3
4	0	4	4	0	4
5	0	5	5	0	5
6	0	6	6	0	6
7	0	7	7	0	7
8	0	8	8	0	8
9	0	9	9	0	9
10	1	0	10	1	0
11	1	1	11	1	1
12	1	2	12	1	2
⋮	⋮	⋮	⋮	⋮	⋮
99	9	9	63	6	3

请勿在 64 至 99 之间设定室内机地址（IU AD SW）。否则可能会导致故障。

(3) 遥控器地址
旋转开关 (RC AD SW)............ 出厂设定为“0”
将多台室内机连接到一个标准有线遥控器时，请从 0 开始顺次设置 RC AD SW 处的地址。

设置	设置范围	开关类型
遥控器地址	0–15	设置示例 0 RC AD

示例　如果安装了 4 台室内机。



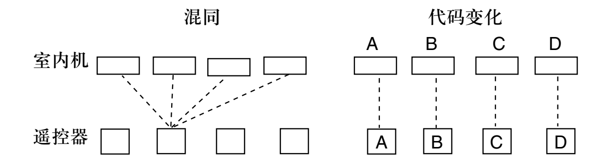
RC AD SW	0	1	2	3	4	5	6	7
地址	0	1	2	3	4	5	6	7

RC AD SW	8	9	A	B	C	D	E	F
地址	8	9	10	11	12	13	14	15

7.2. 用户代码设置

选择用户代码可以防止室内机信号混同。（图 B）
（可以设置多达 4 个代码）
为室内机和遥控器执行该设置。

图 B



- **室内机的用户代码设置**

参考表 B 设置 DIP SW SET 3 SW1, SW2。

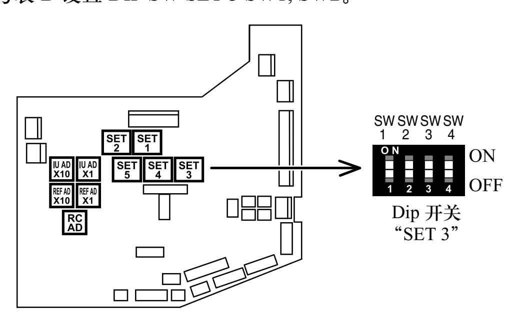


表 B

	用户代码			
	A (出厂设置)	**B**	**C**	**D**
DIP SW SET 3 SW1	OFF	ON	OFF	ON
DIP SW SET 3 SW2	OFF	OFF	ON	ON

7.3. 功能设置

- 可以使用有线或无线遥控器执行功能设置。（遥控器为选购设备）
- 有关详细的设置信息，请参阅有线或无线遥控器的说明书。（将 IU AD, REF AD SW 设为 0）
- 有关室内机地址和制冷剂回路地址设置，请参阅“7.1 设置地址”。
- 开始设置之前，请打开室内机的电源。

  * 打开电源时，室内机初始化 EEV，所以请确保在打开电源之前已执行了管道气密性测试和抽真空作业。
  * 打开电源前，请再次检查以确保没有接线错误。

功能详情

功能	功能号码	设置号码		默认设置	说明
过滤网指示器间隔	11	00	默认设置	○	调整过滤网清洁间隔通知。如果通知时间过早，请更改为设置 01。如果通知时间过迟，请更改为设置 02。
		01	较长		
		02	较短		
过滤网指示器操作	13	00	启用	○	启用或禁用过滤网指示器。设置 02 适用于中央遥控。
		01	禁用		
		02	仅在中央遥控器上显示		
水平摆动气流方向	24	00	默认设置	○	调整水平摇摆气流方向。（适用于带有水平摇摆功能的机型）
		01	左半区		
		02	右半区		
冷空气温度触发	30	00	默认设置	○	调节冷空气触发温度。要降低触发温度，使用设置 01。要提高触发温度，使用设置 02。
		01	调节 (1)		
		02	调节 (2)		
热空气温度触发	31	00	默认设置	○	调节热空气触发温度。要降低触发温度 6 摄氏度，使用设置 01。要降低触发温度 4 摄氏度，使用设置 02。要提高触发温度，使用设置 03。
		01	调节 (1)		
		02	调节 (2)		
		03	调节 (3)		
自动重新启动	40	00	启用		电源中断后，启用或禁用自动系统重新启动。
		01	禁用	○	
外部控制	46	00	开始 / 停止	○	允许外部控制器启动或停止系统，或者执行紧急关机。 * 如果从外部控制器执行紧急关机，将禁用所有制冷剂系统。
		01	紧急停止		
故障报告对象	47	00	所有	○	更改报告故障的对象。可以在所有位置报告故障，也可以只在有线遥控器上报告故障。
		01	仅在中央遥控器上显示		

8. 试运行

8.1. 使用 PCB 进行试运转（室外机）

- 如果使用室外机的 PCB 来进行试运转，请参考本安装说明书了解室外机。

8.2. 使用遥控器进行试运转

- 要使用无线遥控器来进行试运转，请参考遥控器的安装说明书。
- 对空调器进行试运转时，运转和定时器指示灯同时缓慢地闪烁。

详情请参阅“IR 接收器”或“遥控器（有线式）”的安装说明书。

9. 检查项目表

安装室内机（组）时，请特别注意以下的检查项目。安装完成后，请确保再次检查以下的检查项目。

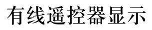
检查项目	如果未正确执行	检查框
正确地安装了室内机了吗?	振动，噪音，室内机可能掉落	
已检查气体泄漏（制冷剂管道）了吗?	无制冷，无制热	
已完成绝热工作了吗?	漏水	
室内机组排水容易吗?	漏水	
电源电压与室内机标签上显示的相同吗?	不运转，发热或烧坏	
电线和管道全都连接正确吗?	不运转，发热或烧坏	
室内机接地了吗?	短路	
连接电缆具有规定的粗细吗?	不运转，发热或烧坏	
保持进口和出口无阻塞物了吗?	无制冷，无制热	
安装完成后，向用户说明正确的操作和处理了吗?	——————	

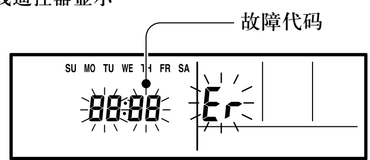
10. 故障代码

如果您使用有线型遥控器，则故障代码将显示在遥控器的显示屏上。如果您使用无线遥控器，机组上的指示灯将通过各种闪烁的组合输出故障代码。请参阅下表中的指示灯闪烁组合和故障代码。

故障显示			有线遥控器故障代码	故障内容
运转指示灯（绿色）	定时器指示灯（橙色）	过滤网指示灯（红色）		
● (1)	● (2)	◇	12	遥控器通信故障
● (1)	● (4)	◇	14	网络通信故障
● (1)	● (6)	◇	16	并行通信故障
● (3)	● (1)	◇	31	电源频率异常
● (3)	● (2)	◇	32	型号信息异常 /EEPROM 存取故障
● (4)	● (1)	◇	41	室温热敏电阻故障
● (4)	● (2)	◇	42	室内机热交换器热敏电阻故障
● (5)	● (1)	◇	51	室内机风扇故障
● (5)	● (3)	◇	53	排水异常
● (9)	● (15)	◇	9U	室外机故障

显示模式 ●：亮 0.5 秒 / 灭 0.5 秒
◇：亮 0.1 秒 / 灭 0.1 秒
( )：闪烁次数





有关指示灯闪烁的详细标记方法，请参阅“IR 接收器”或“遥控器（有线式）”的安装说明书。